MINISTRY OF FOREIGN AFFAIRS
OF DENMARK
Danida

EVALUATION OF DANIDA SUSTAINABLE INFRASTRUCTURE FINANCE PROGRAMME

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Andrew Danino
Peter Frøslev Christensen
John Clifton

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DSIF, Nairobi

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Contact: elk@um.dk

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LIST OF ABBREVIATIONS

APD	Africa, Policy and Development
ADB	Asian Development Bank
BTN	Backbone Transmission Network
CIO	Chief Investment Officer
CSO	Civil Society Organisation
DAC	Development Assistance Committee
DB	Danske Bank
DBF	Danida Business Finance
DFI	Development Finance Institution
DKK	Danish Krone
DP	Development Partners
DR	Desk Review
DRIVE	Development Related Infrastructure Investment Vehicle
DSIF	Danida Sustainable Infrastructure Finance
DWASA	Dhaka Water Supply and Sewerage Authority
EDM	Electricidade de Mozambique
EIA	Environmental Impact Assessment
EKF	Danish Export Credit Agency
ELK	Evaluation, Learning, Quality Department of the Danish MFA
EQ	Evaluation Question
ERG	Evaluation Reference Group
ERRs	Economic Rates of Return
ESG	Environmental Social Governance
ESIA	Environmental and Social Impact Assessment
EUR	Euro
FIDIC	International Federation of Consulting Engineers
FMO	Entrepreneurial Development Bank
FV	Field visit
GDP	Gross Domestic Product
GHG	Green House Gas
HP	Helsinki Principles
HQ	Headquarters

IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
ID	Investment Director
IFC	Industry Foundation Classes
IFU	Investment Fund for Development Countries
JC	Judgement Criterion
LAC	Latin American Countries
LIC	Low Income Country
LMIC	Lower Middle-Income Country
MDB	Multilateral Development Banks
MFA	Ministry of Foreign Affairs
MPI	Ministry of Planning and Investment
MSME	Medium and Small Enterprises
MVC	Monitoring and Verification Consultant
NGO	Non-governmental Organisation
NL	Netherlands
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
OIC	Outcome Indicator Consultant
PD	Programme Document
PDF	Project Development Facility
PMU	Project Management Unit
PPF	Project Preparation Facility
RMS	Risk Management System
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SOE	State-owned Enterprise
TMCEL	Moçambique Telecom, SA
UN	United Nations
UPR	Development Policy Council
USD	US Dollar
VP	Vice President
WAF	West African Fish
WatSan	Water and Sanitation
WHO	World Health Organization
WTP	Water Treatment Plant

EXECUTIVE SUMMARY

The evaluation of the Danida Sustainable Infrastructure Finance (DSIF) programme covers the period 2001 to 2019 and had two objectives. First, it assessed DSIF's relevance, coherency, effectiveness, efficiency, development impact and sustainability, as well as commercial outcomes through its investments. Second, it assessed DSIF's mandate and the policy directions of the MFA over the evaluation period and provides an assessment of DSIF's envisaged future role in Danish development cooperation, and whether the organisation is fit for purpose.

DSIF was established in 1993 under the name "Danida Mixed Credit" and was renamed "Danida Business Finance" in 2011. DSIF offers tied aid through subsidised loans to commercially non-viable projects in developing countries. The supported projects should have a significant Danish involvement through the use of equipment sourced in Denmark, construction work undertaken by Danish contractors, or Danish technical experts and engineers. A small team within the Ministry of Foreign Affairs (MFA) ran DSIF until 2017, when management was passed to the Investment Fund for Developing Countries (IFU) and the DSIF team relocated to the IFU office.

The evaluation entailed reviews of 21 projects (25% of the total number portfolio[1]) in seven countries, four of which (Bangladesh, Ghana, Mozambique and Vietnam) were physically visited by the evaluation team.[2]

1 Excluding projects approved but subsequently cancelled.

2 Desk reviews were also undertaken on three approved projects in Ethiopia, Kenya and Pakistan that are yet to be implemented.

Profile of DSIF Portfolio

- 85 projects in 24 countries (primarily in Asia [10] and Africa [9]) were approved in the period 2001 to 2019. Overall, DSIF's geographical reach has been limited.
- In total, DSIF financing in the evaluation period amounted to DKK 14 billion (an average of DKK 737 million per year), which was roughly equally divided between the 2001-2009 and 2010-2019 periods.
- There was a significant shift from small and medium-sized projects to larger projects.[3] In the period 2001-2009, 69 projects with an average value of DKK 96 million were approved, while from 2010 to 2019, 16 projects with an average value of DKK 454 million were approved.
- 31% of project approvals in terms of number and 38% in terms of total value were in low-income countries (LIC), with 67% and 60% respectively in lower-middle-income countries (LMIC). While in the 2000-2009 period, most projects were in Asia (primarily China and Vietnam), there has been a greater focus on Africa since 2010.
- Sector coverage was uneven over the evaluation period. 33% in terms of number and 39% in terms of value were in water and sanitation (WatSan), followed by 26% and 36% respectively in the energy sector, and 9% and 14% in transport. In recent years the focus has been on WatSan and renewable energy.

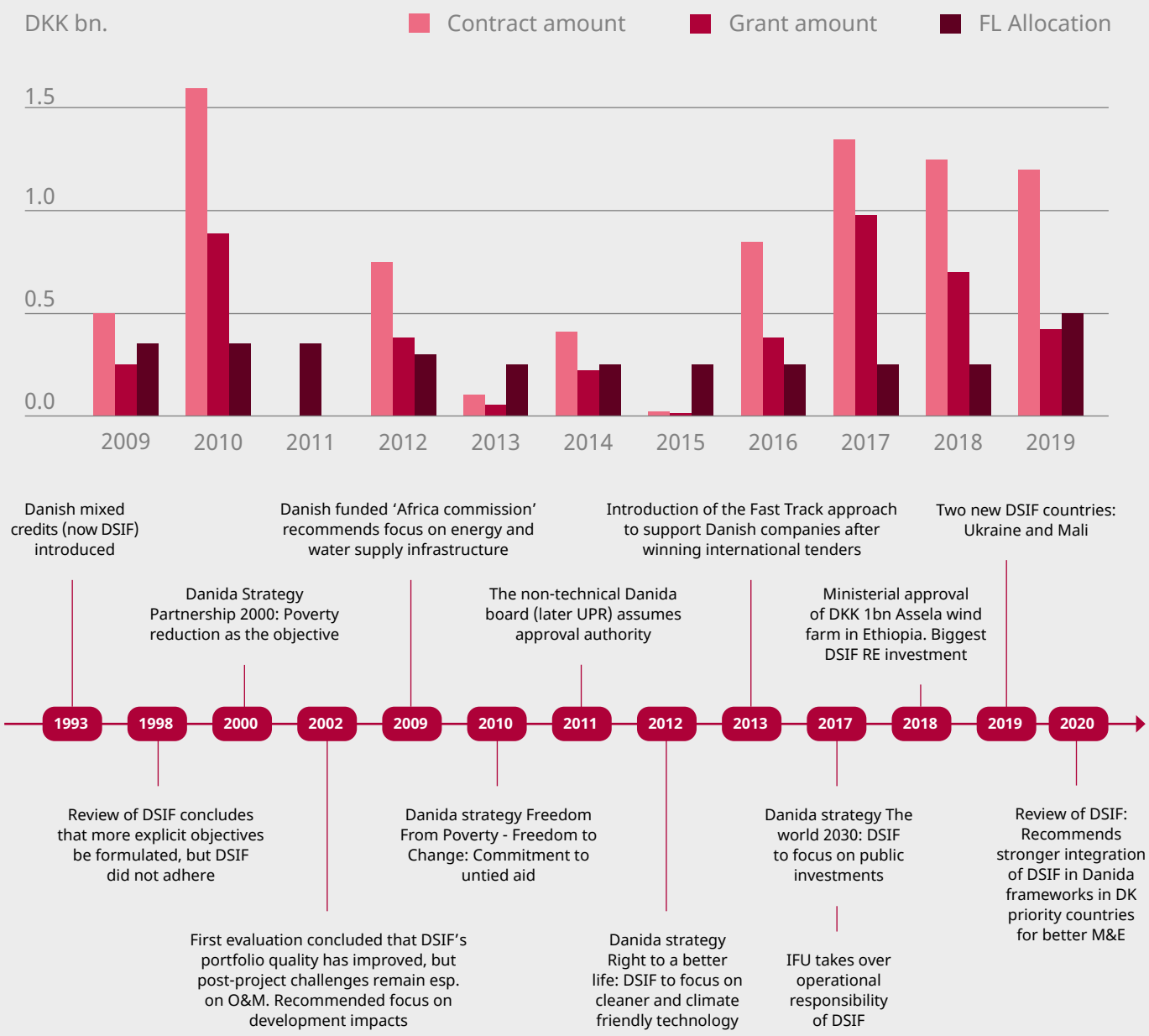
3 Currently, DSIF has a minimum financing amount of DKK 100 million.

The following figure sets out how the DSIF programme has evolved since its establishment in 1993.

Below the findings that address directly the two evaluation objectives set out in the Terms of Reference are presented.

DSIF PROJECT FUNDING, NATIONAL BUDGET ALLOCATIONS AND MAJOR DSIF/DANIDA EVENTS WITH EMPHASIS ON LAST DECADE.

DSIF binding commitments and budget allocation 2009 - 2019 – DKK billion



Objective 1. Assessment of DSIF's relevance, coherency, effectiveness, efficiency, development impact and sustainability

In the countries where DSIF operates, it has been closely aligned with national development policies and achieves high levels of relevance. With increasing integration into Danida country level strategic frameworks, relevance is likely to remain high, but within the limitations imposed by being a tied-aid programme. Coherence with Danish development policies and programmes was less evident in the first half of the evaluation period as DSIF supported projects in a number of sectors outside of Danish country strategies. Since 2010, however, coherence has improved. DSIF's operations are now more closely aligned with Danish development policies with narrower focus on large public sector infrastructure projects in particular in water, sanitation and renewable energy. Moreover, country development strategies are being designed to cover Denmark's entire range of programmes, including those of IFU and DSIF, which should result in better coherence. Coherence with the programmes of development partners, including co-funding in projects, is constrained by the DSIF tied-aid business model that is incompatible with international competitive bidding that predominates. The degree to which DSIF has assisted Danish companies to establish permanent business links in the investment destinations is mixed and difficult to verify.

Geographically, there has been a fair distribution of the 85 DSIF projects in 24 countries, principally in Africa and Asia. The focus has been primarily in low-middle income countries, with limited attention having been given to low-income countries and fragile states. Operationally, the organisational structure, policies and procedures followed for DSIF operations are in general reasonable but could be improved. Additionality in terms of project realization is pronounced, as most of the projects would not have been realized without DSIF support. However, it is overwhelmingly provided in the form of subsidised long-term finance and grants.

DSIF projects have contributed to direct and indirect beneficial development effects, but these are difficult to quantify due to a lack of information. The majority of appraisal reports do not consider the planned development benefits of DSIF projects in sufficient detail, although there has been an improvement in recent years. Gathering information on outcomes and impacts is further restricted by the lack of ex-post reporting after project completion and handover. Field visits found that most projects have delivered planned outputs and continue to be operational post-handover. Coverage of environmental issues has been to a high standard. There has been lighter coverage of social and governance issues, but no serious detrimental long term effects were identified in the field visits. DSIF does not actually track whether projects achieve sustainability. Field visits for completed DSIF case study projects found that sustainability was satisfactory in only one third of them.

Objective 2. Assessments of (a) DSIF's mandate and the policy directions of the MFA over the evaluation period and (b) DSIF's envisaged future role in Danish development cooperation

DSIF has followed well its mandate and the specific policy directions furnished by MFA, although with some lag, as changes to the portfolio obviously take time to implement. In this process DSIF has become more focused and relevant to partner governments who are increasingly viewing DSIF as a partner in financing public infrastructure for green transitioning. However, DSIF has been challenged to evidence its contribution to the overall legally enshrined objective of Danish development cooperation, which is poverty reduction. While this evaluation does provide some insights into these issues, it has been constrained by a lack of information in DSIF files on the effectiveness of its operations that limits both its accountability and lessons learnt.

DSIF has received only general medium to long-term strategic guidance from MFA on what sectors and geographical areas it should focus on, apart from a continued concentration on public infrastructure in renewable energy and water and sanitation, primarily in Africa. With respect to its position in the spectrum of Danish development cooperation, DSIF itself has started to consider projects outside its tied-aid model where other forms of Danish technical expertise and support may be more appropriate. As a unit within IFU, DSIF in 2021 prepared an internal strategy that, inter alia, sets out a greater focus on sub-Saharan Africa, more financial and institutional innovation (including a broader perspective on the promotion of Danish interest) and finally also increased focus on technology transfers. The evidence in this evaluation supports such a change, but arguably there may be a need to go even further to ensure that DSIF is fit for the future. In particular, the rather rigid tying of aid to Danish suppliers is increasingly restricting DSIF's ability to engage with agility and flexibility. This is because the concept of 'Danish' content is becoming more intangible and often intertwined with content from other countries, as Danish companies have pursued globalisation and outsourcing intensively. These constraints and inconsistencies call for a rethink of the current tied-aid policy imposed on DSIF, allowing for better delivery on its development mandate. The recommendations contain pointers to what such a rethink should focus on.

Key Conclusions

At Programme Level

As a tied aid facility, DSIF has been **fit for purpose** in terms of delivering on agreed outputs during the evaluation period. However, it has been less good in tracking the development effectiveness of projects, with insufficient information on development outcomes. DSIF has adjusted to and followed evolving MFA and Danida policies and mandates. It has identified areas of core Danish competencies and focused on fewer and potentially higher impact projects within the public sector. Moreover, it has worked well with Danish companies offering cutting edge technologies required for green transitioning, which are increasingly in demand in partner countries. Nevertheless, **the tied-aid** model limits development effectiveness and flexibility. Specifically, the operating model may restrict DSIF's ability to support and complement other Danish in-country engagements in focus countries (for example, where it cannot identify Danish partners to work with), potentially reducing the overall effectiveness of Danish aid by making it more challenging to align with Danish strategic country frameworks in partner countries. Also, no evidence was available to prove that tied aid is cost-effective for clients.

For the most part, DSIF has fulfilled its **mandate** and complied with Danida policies. It has adapted to shifting Danida sectoral priorities by, inter alia, ending private sector projects (in agribusinesses and industry). It moved decisively towards green infrastructure, most notably within renewable energy, water, and sanitation. Moreover, it now concentrates on larger investments. A downside of this shift is that DSIF currently only approves around one project per year and has a thin pipeline in a small number of countries, reducing its geographic reach.

The anticipated benefits of the **relocation of DSIF to IFU** have only been partially realised. This is due to an incompatibility between DSIF's tied aid public sector operations and IFU's private sector mandate that makes project-level collaboration difficult. The relocation has formalised and made explicit the goals and strategic objectives that MFA has set for DSIF and how they are monitored.

On the crucial mandate objective of delivering on the **poverty reduction** that is enshrined in law, DSIF has made inadequate efforts to define and quantify development outcome objectives and, more importantly, track their achievements (see, for example, EQ6 Synthesis). DSIF's focus is principally on outputs and its engagement with clients ends with completion and handover of projects.

At the strategic level, **coherence with MFA's global policies**, which DSIF consistently followed, has been robust. In recent years, the transition to

larger public sector infrastructure projects and closer collaboration with embassies has strengthened project and country-level coherence.

By concentrating on sectors and areas where Danish companies, contractors, and consultants are internationally competitive and can add value, DSIF has remained **relevant to project buyers, government partners and the MFA.** To be relevant developmentally, the move to only supporting large projects makes it even more important that DSIF projects be in sectors of the highest national importance.

The focus on individual projects and not the overall programme has meant that little or no attention is paid to the **long-term sustainability of DSIF** as a whole. Moreover, having just one Danish bank (Danske Bank) making loans to DSIF clients, has left the programme vulnerable in the unlikely event that the bank decides to stop working with DSIF. It also restricts DSIF's ability to provide untied loans.

At Project Level

In most projects reviewed, there were **strong complementarities** between DSIF and other Danida engagements, although the potential for realising more of the potential synergies is yet to be fully exploited. Cooperation on country interventions between DSIF, embassies and Danida HQ in strategic sectors (water, sanitation and renewable energy) could have been better.

Logical and results frameworks in the 21 projects assessed had an emphasis on outputs (i.e. up to project completion and handover). Insufficient attention was given to outcomes (baselines, targets and indicators to measure outcome achievement), although there has been an improvement in recent years.

Tracking outcomes over the medium term is not possible as project monitoring terminates at the end of the one-year period following completion and handover (with the verification of no defects). DSIF **projects mostly generate significant development outcomes that are not captured and recorded in its monitoring frameworks**, especially in water and sanitation. Outcomes have been enhanced by compliance with the higher, international environmental standards that DSIF has insisted upon as a condition for its support.

The lack of reporting post-completion on how projects are performing means that DSIF has **limited information on project sustainability.** Furthermore, there is no system in which lessons learnt from projects already undertaken, i.e. what works, what does not and why, are recorded for use in the design and structuring of new projects.

Additionality was primarily generated in the form of subsidised finance and grant packages that were required for projects that were not financially viable (i. e. financial additionality). DSIF was not able to mobilise finance from development partners, as its tied aid model, with equipment supply and contracting restricted to Danish companies, may not be acceptable to development partners who generally require international competitive bidding. Non-financial additionality was found in only half of the case studies and took the form of support for feasibility studies, ESG studies (including mitigation and management) and other DSIF support in launching projects.

Except for projects having to be approved by both IFU and MFA, **the policies and procedures** for identifying and appraising projects are appropriate and similar to those used in other development institutions. There is some overlap and duplication between DSIF and MFA at key stages during the project cycle, resulting in additional workload for DSIF staff and longer processing times as documents have to be prepared and presented to both institutions.

Key Recommendations

Upgrade the Results Measurement System (RMS). DSIF should put development effectiveness at the centre of its projects, including the formulation of theories of change. Outcomes should be tracked for five years post-completion. This should lead to a much stronger commitment to delivering the forecast economic rates of return/development outcomes and ensuring the long-term sustainability of projects. The identification of various shortcomings on tracking outcomes led to the implementation of a specific study on the RMS in 2018. While its recommendations on setting up proper development outcome tracking systems and procedures have yet to be formally incorporated in DSIF policies and procedures, it is evident that the quality of Theories of Change (ToC) in project documents has improved over the last three years. It is recommended that the 2018 report be used to strengthen the RMS. Moreover, to encourage a greater focus on outcomes and sustainability, it is recommended that **one or two additional staff** be hired to work on the theories of change in new projects and outcome monitoring of projects for up to five years post-completion.

MFA should increase its assistance to, and oversight of, DSIF in the preparation phase, including ensuring that project documents are fully compliant with Danida policies and strategies. Additionally, MFA could assist DSIF in formatting required documentation for presentation of projects to the Danida Programme Committee and the Development Policy Council, which might provide valuable oversight and useful comments.

Experiment more with DFI co-financing in projects, even if it may require undertaking projects where tied aid cannot be used. This could

make it easier for DSIF to work with DFIs and increase the reach of the Danish aid Krone, as the subsidy level would be lower and could be spread over a greater number of projects. Using untied aid modalities could potentially increase the volume of DSIF projects. **DSIF's sector focus should be reviewed** and refined regularly to ensure that it remains relevant to clients in target countries and the mandated objective of poverty reduction. While energy and especially water are likely to remain key sectors, there may be others where Danish expertise brings added value to infrastructure projects. For example, an increased focus on green technology could be a logical extension to the renewable energy sector, one of the two focus sectors. Areas of support could include waste management, recycling, upcycling and 'cradle to cradle' technologies, for example, sectors where Danish expertise could be introduced to developing countries.

Closer collaboration with Danish industry through the Confederation of Danish Industry should help identify new sectoral opportunities for DSIF. Within energy, non-commercial, land-based wind turbine projects may be restricted to low-income countries. Instead, commercially competitive operations, not requiring DSIF support, will probably emerge but there could still be a role for distribution and transmission, also to optimise development effectiveness.

Make even greater use of embassies to help identify projects and ensure a good alignment with the Danida country strategic frameworks. While solid progress has been made, there are opportunities for improved coherence. For example, Danida grant financing can ensure higher inclusiveness and better development outcomes of DSIF investments if properly planned and executed. Similarly, the strategic sector cooperation programmes could be leveraged further to ensure that Danish public sector competencies are utilised where relevant.

Ensure systematic integration into ongoing and future country strategic frameworks. This will allow for better alignment, potentially ensuring that Danish industry interests are also leveraged whenever relevant and feasible.

Intensify efforts to **strengthen business links in partner countries** in order to maximise the opportunities for Danish exports of equipment and services, including know-how and technical expertise.

Examine the potential of alternative business models that are more open to cooperation with other financial institutions. The current DSIF approach through loans to governments disbursed to the target projects, limit its additionality and make it difficult to co-finance with development and commercial banks. Consideration should be given to structures, such as dedicated legal entities (project companies), into which DSIF supported funding can be disbursed, and a project finance approach adapted to mobilise commercial or development bank loans, following a blended finance model.

1. INTRODUCTION

Objectives and Scope

The evaluation of the Danida Sustainable Infrastructure Finance (DSIF)[4] Programme is the second evaluation of the programme since it was established in 1993 under the label of Danida Mixed Credits.[5] This evaluation aimed to satisfy learning and accountability purposes on both the side of Investment Fund for Developing Countries (IFU, including DSIF) as well as the Ministry of Foreign Affairs (MFA). As set out in the terms of reference, the evaluation had two objectives. First, it made an assessment of DSIF's relevance, coherency, effectiveness, efficiency, development impact and sustainability, as well as commercial outcomes through its investments in developing countries. Second, it aimed to assess DSIF's mandate and the policy directions of the MFA over the evaluation period and provides an assessment of DSIF's envisaged future role in Danish development cooperation, and whether the organisation is fit for purpose.

Management of the Evaluation

The evaluation was commissioned by the Danish MFA and coordinated by the MFA's Evaluation, Learning and Quality Unit (ELK). It was led by ELK with the support of an Evaluation Reference Group (ERG), which consisted of representatives from the MFA (ELK, Department for Growth and Employment), IFU, DSIF itself and external members from Danish civil society organisations as well as private sector associations.

The role of the ERG was to provide feedback and to comment upon the outputs produced, as well as to guide the evaluators and facilitate access to documentation and to relevant stakeholders and other actors. The main deliverables of the evaluation were delivered electronically and presented to the ERG virtually and in person. The evaluation team discussed ERG feedback with ELK and adjusted the deliverables where necessary. ELK gave final approval for all deliverables.

4 Danida Sustainable Infrastructure Finance was renamed from Danida Business Finance in January 2020. For notional simplicity, this abbreviation will be used to describe the programme during the full evaluation period.

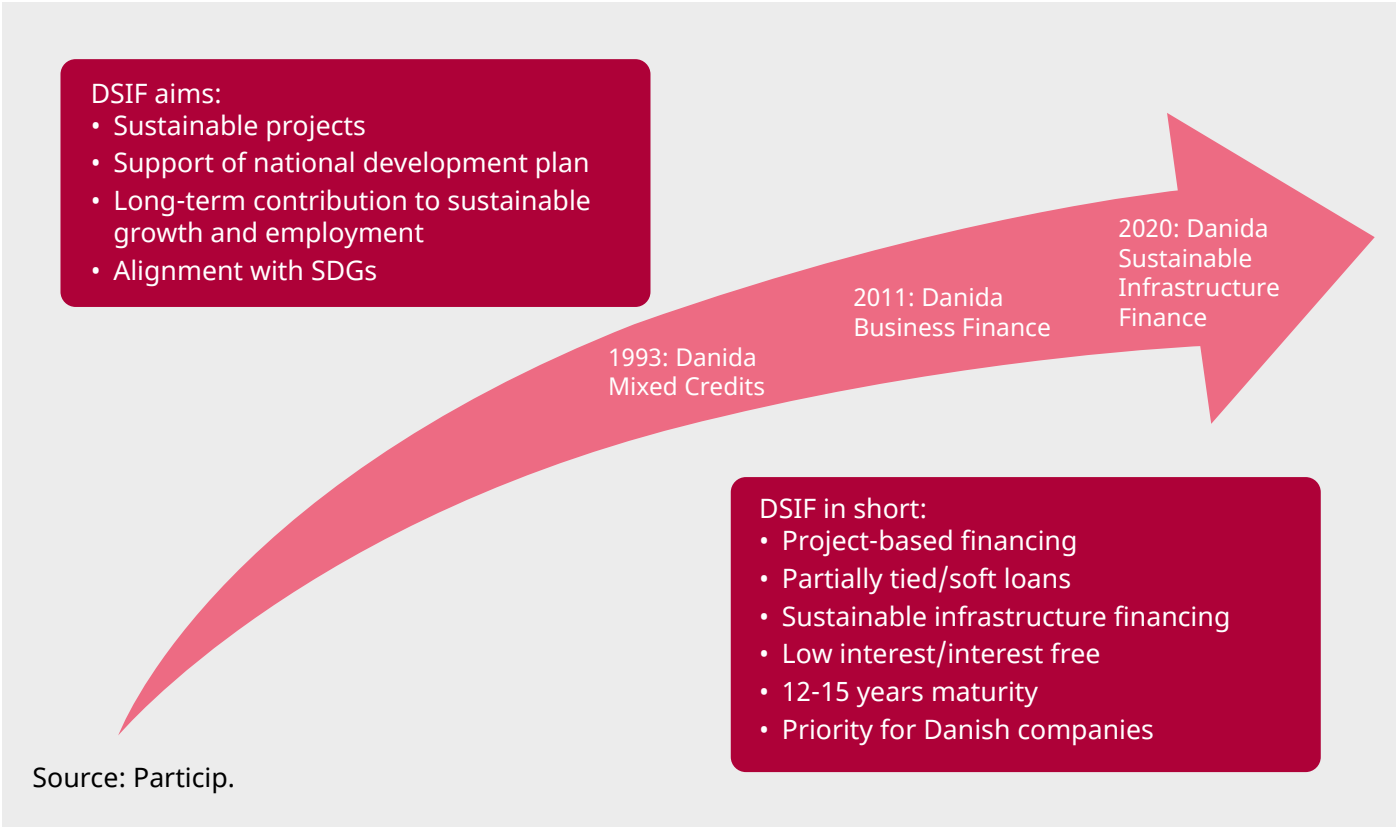
5 The first evaluation took place in 2001, taking into account the first eight years of Danida Mixed Credits, which was the predecessor of DSIF.

2. EVOLUTION OF DSIF PROGRAMME

DSIF forms a part of the Danish development assistance portfolio. It provides access to finance for commercially non-viable infrastructure projects and is a facility that mobilises finance for sustainable infrastructure projects in developing countries based on the countries' development strategies. Figure 1 gives an overview of the programme and its aims.

The programme's results contribute to the achievement of the UN's Sustainable Development Goals (SDGs), thereby creating growth and employment in developing countries. It supports development projects which can neither be financed on ordinary commercial terms nor with grant assistance and complements other Danish financed activities for the benefit of the recipient countries. Figure 2 shows the financing support model that DSIF follows. DSIF actively involves the Danish private sector. To improve its operating efficiency and benefit from the private sector investment focus of IFU, in 2017 management of DSIF was transferred from the MFA to IFU.

FIGURE 1: OVERVIEW OF DSIF

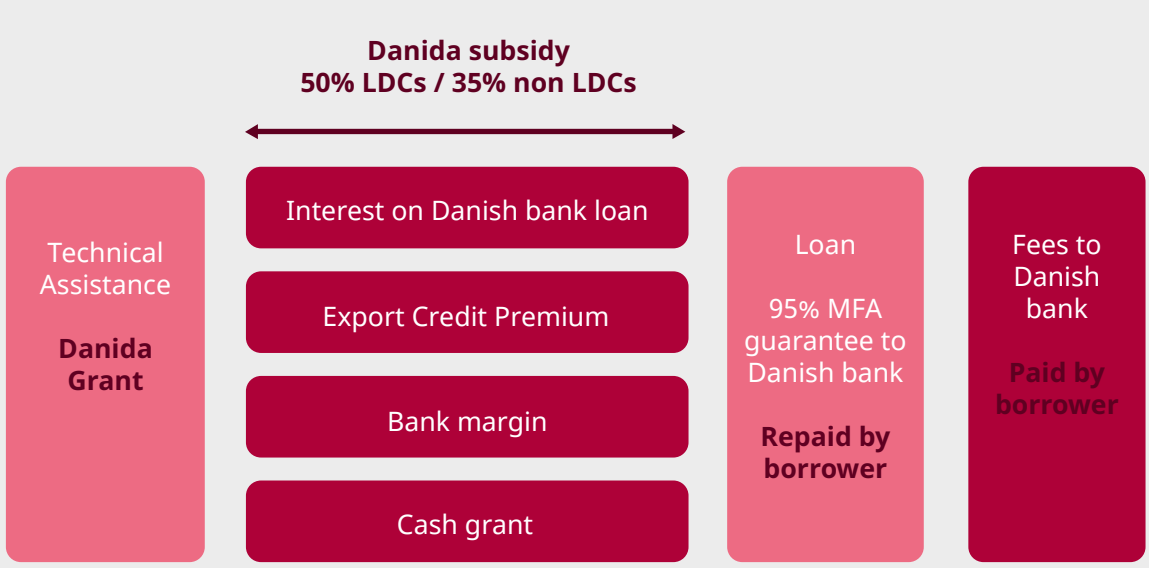


Source: Particip.

The DSIF programme (initially called the mixed credit facility) was launched in 1993 as a means to comply both with OECD/DAC rules on tied aid and EU rules on state aid to companies. It evolved not only in name, but also in management and focus. Initially China[6] and other countries in Asia were the main beneficiaries. The focus on poorer countries became more pronounced in the Danida strategy from 2000. Since then the focus has shifted towards south and south-east Asia and particularly Africa. The stronger Danida focus on poorer African countries, including fragile states, has not fully been mirrored by DSIF (and its predecessors) which historically has tended to focus on middle income countries, but with a recent trend towards lower income countries. The modalities of the DSIF changed in the 2000s with the introduction in 2002 of an 'untied' international tender fallback option, should there be insufficient competition in the Danish market. That has only been used in a few projects.

A green focus was explicitly highlighted in the Danida strategy of 2012, 'The Right to a Better Life', where DSIF was singled out and directed to focus on 'critical infrastructure such as energy supply' promoting climate-friendly and cleaner technology. In 2013, the Fast Track approach was introduced allowing support to Danish companies winning an international tender, in which case DSIF support is approved only after the tender evaluation. In 2017 where Danida

FIGURE 2: DSIF FINANCING SUPPORT MODEL



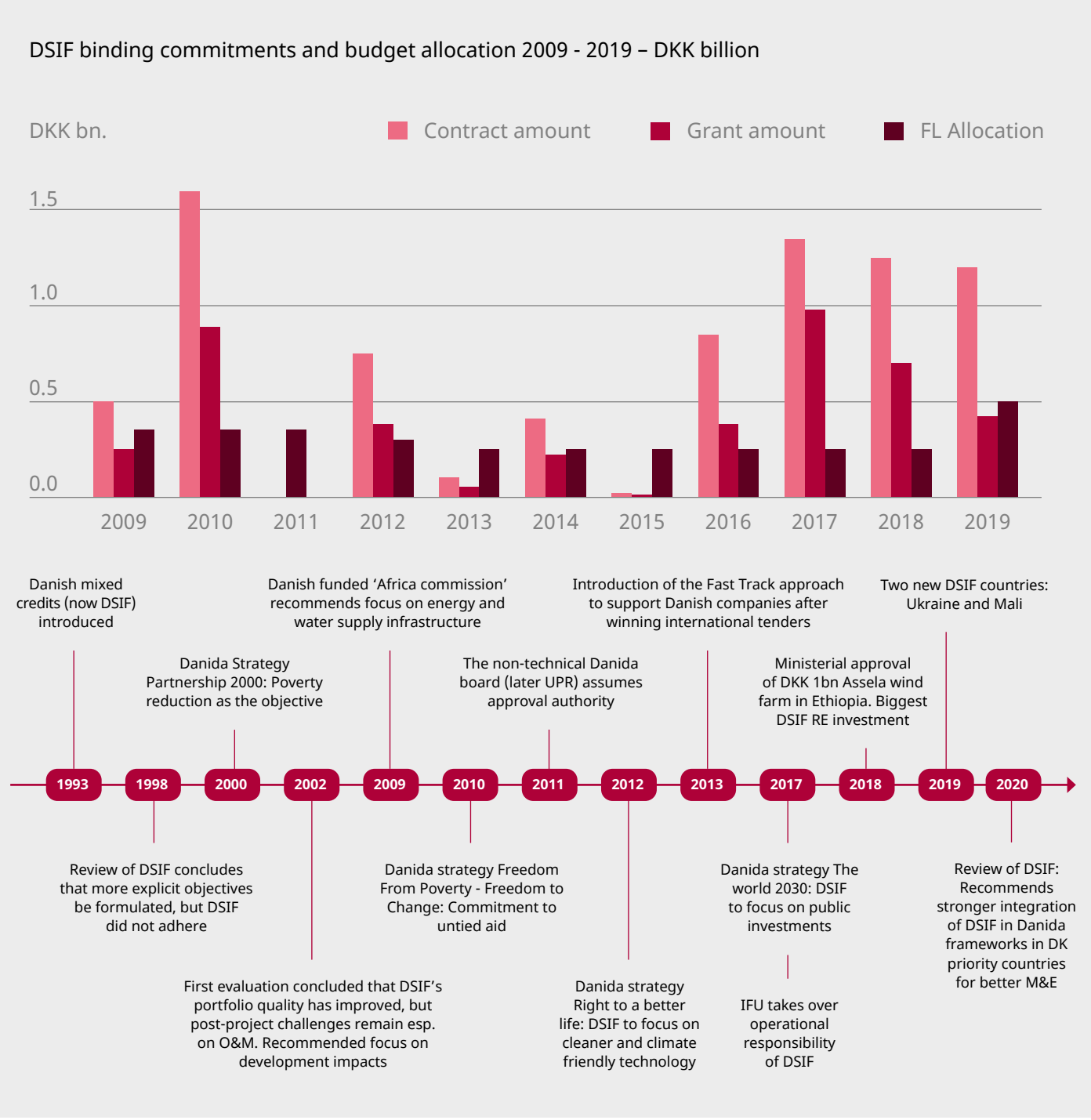
Source: Particip.

6 The last DSIF project in China was approved in 2010.

restated its commitment to the DSIF and prioritise more financing for it but with a focus on large public sector infrastructure projects.

Until 2017, DSIF was managed as a unit within MFA, initially with a 'Committee for Mixed Credit' ('udvalget for blandede kreditter') as the key steering and governance institution. After 2011, the Danida board

FIGURE 3: INSTITUTIONAL DEVELOPMENT OF DSIF AND FINANCING COMMITMENTS

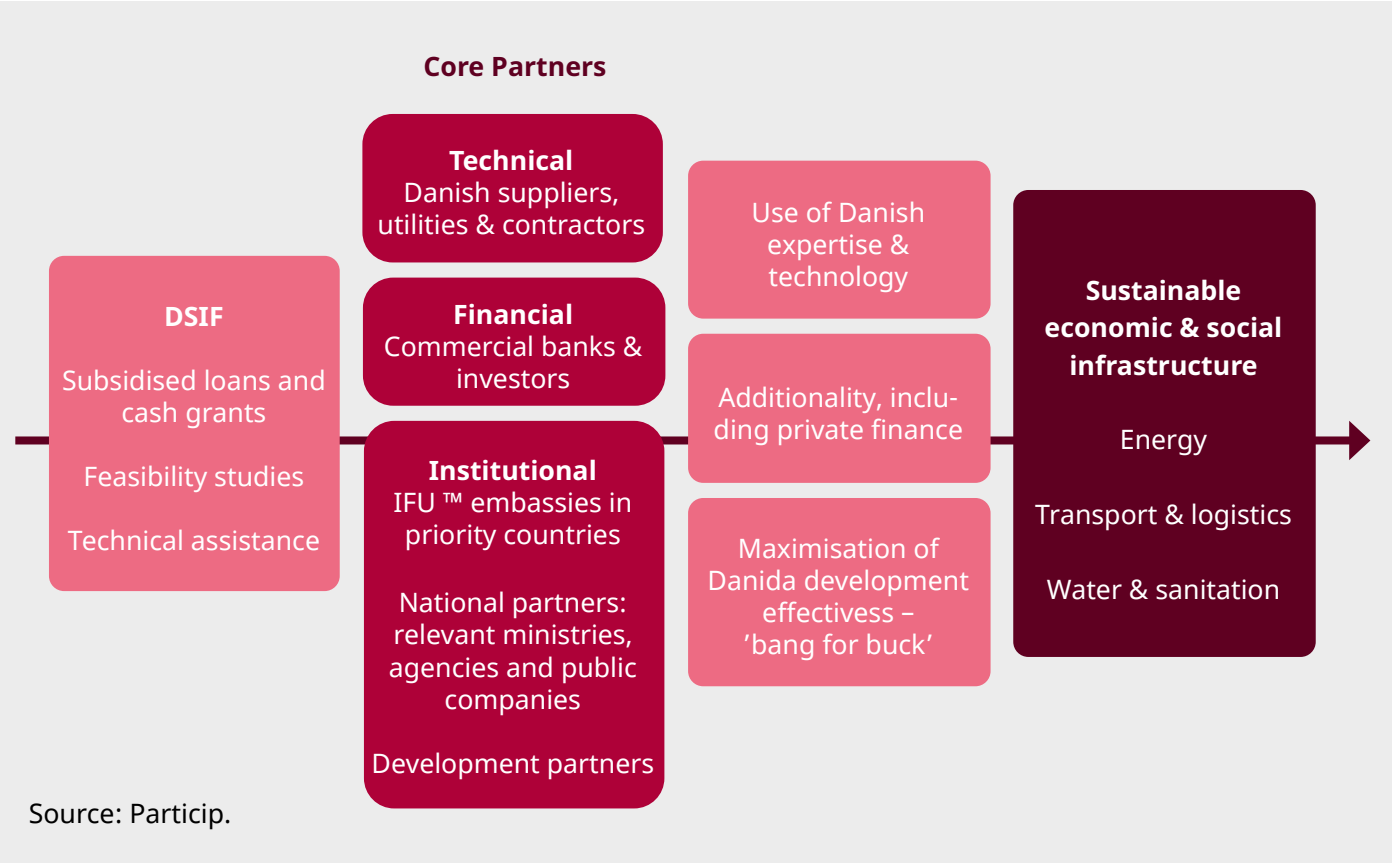


took over responsibility for steering and approving DSIF activity. In 2017, operational management of the DSIF was handed over to the state-owned IFU, which already managed, inter alia, several Danida funds and programmes. The key rationale for the move was to allow DSIF to leverage commercial finance and technical expertise from the private sector, thus improving development outcomes and increasing cost-effectiveness. The transfer to IFU also coincided with the introduction of a new project development facility (also managed by IFU). The figure below summarises the institutional development of DSIF.

DSIF Cooperation Framework and Theory of Change

Figure 4 presents an overview of the DSIF cooperation framework. In addition to presenting an overview of the main financial products and services that DSIF provides, the graphic shows the core partners (excluding the individual project buyers) with which it works and the value that DSIF brings to the projects it supports.

FIGURE 4: DSIF COOPERATION FRAMEWORK



Source: Particip.

3. METHODOLOGY

This chapter discusses the evaluation methodology. It is subdivided in three sections. In the first section, a brief outline of the general approach and the data collection tools is presented. In the second section follows a description of the team's approach to the evaluation objectives and the understanding of the related EQs. In the third section, the evaluation techniques used to address the objectives and evaluation questions (EQ) are presented.

General Approach and Data Collection Tools

The methodological framework for the evaluation applied a theory-based approach building on an anticipated sequence of linkages from inputs and activities to outcomes and impacts. This approach involved the creation of a theory of change (ToC) that illustrates in a diagrammatic form the development logic of DSIF.[7] This ToC was discussed and agreed upon with ELK during the inception phase and formed the foundation for the evaluation framework. However, the methodology, the ToC and the evaluation matrix were carefully reviewed at key stages of the evaluation. As an integral part of the methodology, the ToC was reconstructed to support the evaluation team in responding to the EQs which were grouped under the two overarching objectives for the evaluation.

The guiding principle to data collection has been to triangulate evidence whenever feasible from as many sources as possible so that findings are based on corroborated information and data. In addition, information was compared from the different types of interventions and judgements are based on a preponderance of the evidence. Below are listed the tools and methods that were used to obtain data and information.

- Key informant and stakeholder interviews with interested parties in IFU and MFA as well as DSIF were, inter alia, one of the principal sources for the evaluation. Other stakeholders in Denmark interviewed included the Confederation of Danish Industry, consulting engineers, key suppliers and contractors, EKF, Danske Bank (DB) and international

7 Please see Annex B: Theory of Change for a visual representation of the ToC.

non-governmental organisations (NGO). A full list of individuals interviewed is presented in Annex D: List of persons interviewed;

- During field visits interviews were held with project managers, state-owned utilities and ministries, development partners in country, Danish embassies, beneficiary/community representatives and NGOs;
- IFU, MFA and EKF provided, inter alia, project documents, DSIF programme plans, reports and portfolio information;
- Particip's research for additional/complementary data on projects and their political, economic, environmental and social context from online and other sources;
- Site visits to project locations to identify and assess outputs, i.e. verification that infrastructure is built and operating.

More details on data collection during the evaluation is provided below.

Evaluation Objectives in the Evaluation Framework

The ToR of this evaluation set out two central objectives under which the EQs were grouped and which guided the analysis as overarching themes:

Objective 1: Assess DSIF's relevance, coherency, effectiveness, efficiency, development impact and sustainability as well as commercial outcomes through its investments in developing countries. Under this objective there are eight EQs. Seven of these (EQs 1,2, 3, 4, 6, 7 and 8) are in line with the OECD DAC evaluation criteria relating to relevance, coherence, effectiveness, efficiency, impact and sustainability.

EQ5 addresses additionality, including a review of what forms it takes. The evaluation followed the principles set out in a 2021 review by OECD Development Co-operation Directorate[8] and the 2018 Multilateral Development Banks' Harmonized Framework for Additionality in Private Sector Operations.[9] The key gauge used in the evaluation is that for DSIF additionality (financial or non-financial) to be proven, there must be evidence that a project would either not have been funded or would have been funded much later without DSIF intervention.

8 Winckler et al (2021): "Evaluating financial and development additionality in blended finance operations", OECD.

9 MDB group (2018): Multilateral Development Banks' Harmonized Framework for Additionality in Private Sector Operations.

In addressing Relevance (EQ1), the concise DAC definition – Is DSIF doing the right things? – was evaluation's guiding principle. JC1.1 is addressed in the case studies; while meeting DAC criteria for relevance JCs 1.2, 1.3 and 1.5 provided more insightful information on fit with national development strategies and plans. However, JC 1.4 (Complementarity with development partners operations and strategies) addressed issues that, according to DAC definitions, refer to external coherence and could have been part of EQ2.

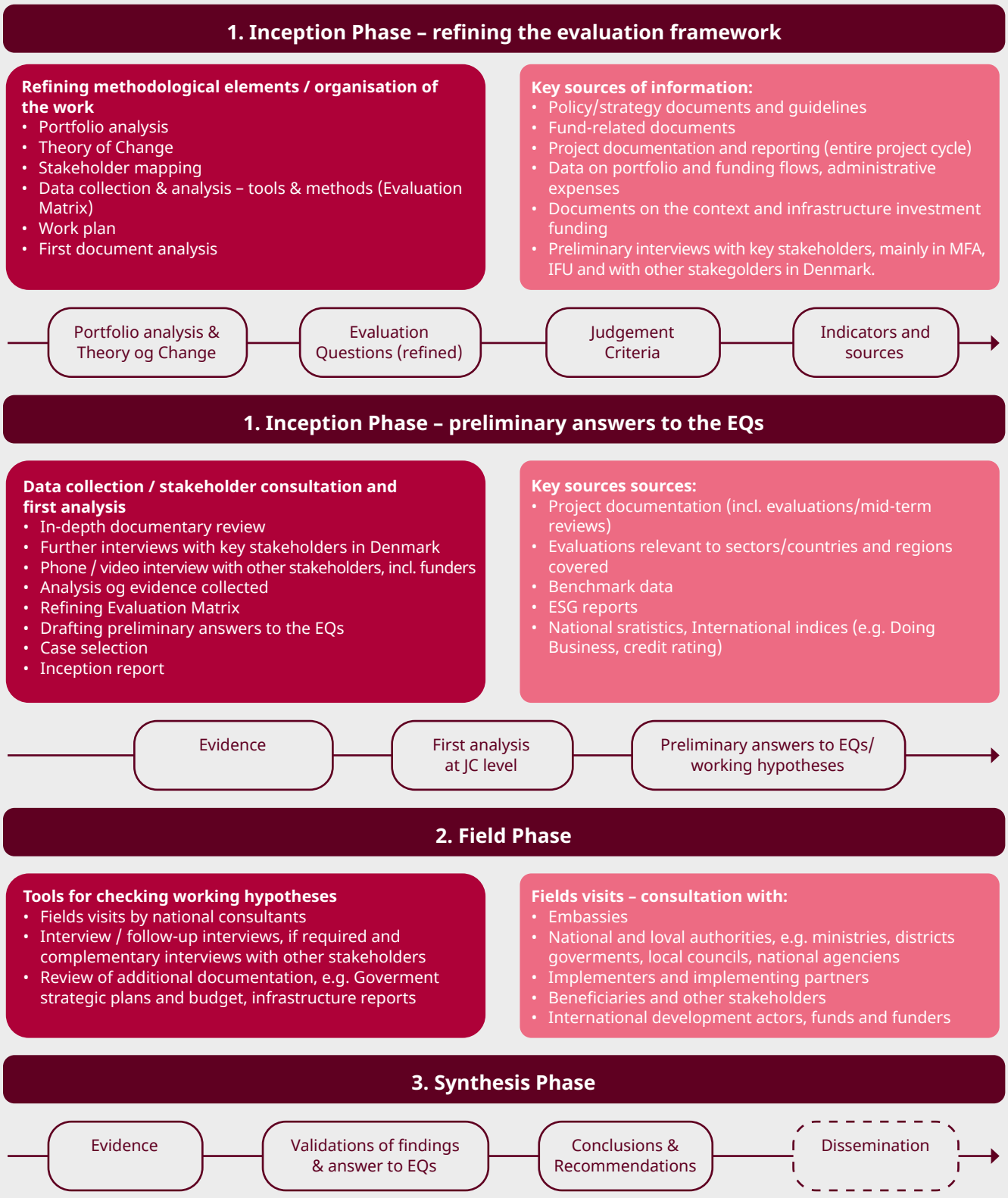
For coherence (EQ 2, 3 and 7) the evaluation focused on the fit of the DSIF programme with other Danida and Danish development interventions in a country (internal coherence, EQ3 and EQ7) and the activities of other development institutions and agencies in a country (external coherence, EQ2). A key source of evidence used to assess internal coherence in the case studies was the fit of a new project with strategies agreed between Denmark and a particular country in effect when approved. In assessing external coherence, it was important to consider that tied aid DSIF works under the premises of a tied aid modality. Therefore, projects may not fit easily into the overall development framework in a country. At the same time, JCs 2.1 and 2.2 deal with standard internal coherence. JC 1.3 (Danish business links with beneficiary countries) addresses a specific feature of this tied aid programme: supporting Danish exports of goods and services to beneficiary countries. While EQs 1 (Relevance) and 2 (Coherence) should be complementary, as they relate to the appropriateness of DSIF project selection, there remained some overlaps between them. Of note is that EQ1 – JC 1.1 (Alignment with MFA development policies and strategy) and EQ2 – JC 2.1 (Systematic research for coherence with MFA development policies and strategy) and JC 2.2 (Synergies/complementarity with other Danish development initiatives) address similar issues.

EQs 4,6 and 8 take account of the DAC criteria for project implementation and performance (effectiveness, efficiency, impact and sustainability).

Objective 2: Assess the policy directions of the MFA and DSIF's mandate over the evaluation period and provide an assessment of DSIF's envisaged future role in Danish development cooperation and whether the organisation is fit for purpose.

These four EQs (9 to 12) go beyond the DAC evaluation criteria to address issues of concern to MFA, including, inter alia, how DSIF has fulfilled its mandate and the quality and appropriateness of its result measurement system to capture and report on development effectiveness.

FIGURE 5: DSIF EVALUATION STEPS AND APPROACH



Source: Particip.

Evaluation Phases and Sequencing

The evaluation involved three consecutive phases as described below. Each of the phases built upon the preceding phase results as illustrated in Figure 5.

Inception Phase
As Figure 5 illustrates, the inception phase was divided into two parts. In the first part, the team refined the evaluation framework, which guided the entire approach to the assignment. In the second, the team focused on finding preliminary responses to the EQs based on a rigorous desk review of primary and secondary documentation.

Revising the evaluation framework included several steps. First, the portfolio analysis provided an overview of DSIF projects' geographical and temporal distribution, volumes, and developments over time. The analysis was also crucial in identifying trends in DSIF operations and in deriving a sample of case study projects that was broadly representative of the portfolio. Second, a stakeholder mapping provided an overview of the relevant actors the team needed to target at the global and country-level both at the inception and data collection phase. In the inception phase, scoping interviews (in Copenhagen and by Skype, Teams and Zoom) included discussions with DSIF, IFU, MFA staff, and other stakeholders in Denmark. Third, the team conducted a preliminary analysis of the DSIF operating processes and procedures based on the desk review, stakeholder mapping and scoping interviews which informed the subsequent design of data collection tools. Finally, the team used the data from these four sources to reconstruct the ToC and refine the evaluation matrix, providing a solid evaluation framework for the consecutive phases and the further course of the assignment.

Similarly, providing preliminary responses to the EQs included several steps. As a first step, the team conducted an in-depth review of the available documentation, building on the analysis undertaken previously and broadening the body of documents analysed. The review was then complemented with additional stakeholders interviews in Denmark and abroad using the stakeholder mapping from the preceding phase. After agreeing on the final evaluation matrix with the ERG, the collected evidence was analysed to draft preliminary answers to the EQs based on the available body of evidence. Moreover, a sample of case studies for field visits in the case study countries was determined and approved by ELK (please see Table 1).

Field Phase
The purpose of the field visits was twofold. The first was to assess the actual functionality and quality of the infrastructure provided by DSIF projects. The second was to conduct interviews with key stakeholders identified through the mapping at the inception stage to collect evidence

on the perceptions of local project contributors and beneficiaries on project planning, implementation and mid- to long-term impact. Those included direct beneficiaries, local authorities, implementing contractors, as well as Danish embassy staff and Danish company representatives involved in the projects. Interviews with local stakeholders provided the team with additional documents to review, including strategic government documents, plans and budgets, and infrastructure development plans.

In total, 21 project reviews were prepared, covering seven partner countries. See Table 1 for the summary of the project distribution. The full field visit documentation is provided in Annex G: Case studies.

TABLE 1: OVERVIEW OF SAMPLE PROJECTS

Case Study Focal Countries

Location of the project(s)	FV/DR	Total	Infrastructure	Private sector
Bangladesh	FV	3	3	
Ethiopia	DR	1	1	
Ghana	FV	4	3	1
Kenya	DR	1	1	
Mozambique	FV	5	5	
Pakistan	DR	1	1	
Vietnam	FV	6	6	
Totals	**4 FV, 3 DR**	**21**	**20**	**1**

FV: Field Visit, DR: Desk Review.

The four countries visited account for 18 of the 21 projects reviewed. Although four countries were subject to field visits by local Particip consultants, only 17 projects could be physically visited due to restrictions associated with COVID-19 or other constraints. The remaining three were recently approved projects where implementation had not begun. Since there was nothing to see on the ground, these three projects were only subject to a desk review. 20 of the 21 projects reviewed were public

sector sponsored infrastructure projects (the current focus of DSIF), while one was a non-infrastructure private sector project.

The following describes the principal criteria used to select 18 projects in the four proposed countries:

- Temporal scope: projects approved from 2010 onwards. However, the sample includes some projects approved earlier that had long implementation periods. Projects approved pre-2010 that had follow-up (phase 2) investments approved post-2010 were also included.

- Regions/countries: the selection encompasses operations in the two most key regions (Africa and Asia) where DSIF has implemented projects.

- Sectors: Most projects were in public sector infrastructure (notably nine in water and sanitation), with only two private sector projects in Ghana and Mozambique included. Unsurprisingly, the infrastructure projects were considerably larger than the private sector projects.

- Project phase: the selection focused on completed projects to ensure that judgements on the developmental, operational and economic performance can be made.

All projects subject to a field visit or a desk case review were analysed against a standardized case study rating system to enable comparability in their performance against the judgement criteria (JC) set out under the EQs. The rating system was based on a set of quantitative indicators that determined the rating assigned for each project, a standard best practice to minimise evaluator bias.[10] In terms of DSIF project information in MFA and IFU files, there was a lack of data on quantitative targets, especially on development outcomes where impact assessment is lacking (see Evaluation question 11: Result Measurement System). Accordingly, the team designed a simplified three-tier 'traffic light' rating system instead. Additionally, qualitative assessments of JC achievements were made based on the evidence gathered from DSIF documents, stakeholder interviews and field visits. The rating scale is summarised below:

- Satisfactory: Evaluation criteria have been substantially met with no or only minor shortcomings with the JC and EQ.

10 AfDB, for example, has a 'development objective' rating system that uses four ratings: i) highly satisfactory, ii) satisfactory, iii) unsatisfactory and iv) highly unsatisfactory. The rating is assigned based on the % achievement of a given target.

- Partly Satisfactory: Evaluation criteria have been partially met, but there are significant shortcomings with the JC and EQ.

- Unsatisfactory: JC and EQ have not been met.

While the system relies heavily on the judgement of the evaluators, wherever possible, the ratings are based on triangulated sources of evidence. For some EQs, such as EQ8 on sustainability, a project may only have been in operation for a few years. Therefore, the development effectiveness rating was based on the assumption that progress to date will continue.

After completing the majority of field work, the team presented the preliminary and emerging findings of the case studies to the ERG on 8 June 2021.

Mitigating the Impact of COVID-19 Imposed Limitations on Field Visits

Due to the COVID-19 pandemic, travel restrictions posed new challenges to the evaluation team. The travel restrictions prohibited the evaluation team from all travel to Copenhagen (for meetings with the IFU and MFA) and the case study countries to conduct the data collection in person.[11] Consequentially, the evaluation team was expanded to include seven senior national consultants experienced in evaluation and engineering within each case study country to limit the adverse effects on the evaluation. The national consultants conducted the field visits to projects in Bangladesh, Ghana, Mozambique and Vietnam in close coordination with the core team members.

Wherever possible, core team members participated remotely in meetings held in-country. The core team was in continuous communication with the national consultants, closely supervised the field missions, and rigorously reviewed the field reports submitted to ensure they fully complied with sound evaluation principles and standards.

Synthesis Phase

Drafting answers to the EQs brought together findings from the inception (overall programme review) and case study phases discussed above. In answering the EQs, the team focused on identifying trends in overall performance. For example, by looking at what has worked and what has not worked in projects, lessons learnt were formulated with a forward-

11 Apart from one team member who was able to visit in August 2020.

looking perspective to improve their utility to DSIF, MFA, IFU and other stakeholders in future projects. Given the in-depth nature of the case studies that form Volume 2, it was important to extract findings related to the overall programme rather than the specifics of individual projects.

The rating tables at the beginning of each EQ[12] in Chapter 6 provide an overview of the performance of the 21 projects according to the formulated JCs using a traffic light colours system. Particip team members liaised closely to ensure that the rating system was applied consistently and that ratings were comparable. After the initial tables were formulated, the team was able to reassess and question whether ratings to individual projects were appropriate, vis a vis other projects in the case study sample. In this way, the tables provided the starting point for the analyses and syntheses under each JC by forming the basis for the discussion of findings for each EQ.

The syntheses set out in the EQs utilised both quantitative and qualitative data gathered from the desk and field phases. Overall, the data and evidence gathered on project identification and appraisal was detailed and sufficient for the analysis. Additionally, the team accessed good data on output reporting and project implementation through the monitoring consultants

Note on the Proposed Survey

Although a survey was foreseen in the Inception Report, the team faced significant challenges in identifying the intended targets, namely the beneficiaries of infrastructure projects. This is because DSIF does not clearly identify the intended beneficiary groups in project documents and there is no tracking of outcomes post-completion. Therefore, the evaluation team agreed with ELK to cancel the survey. Instead, wherever possible, the national consultants held ad-hoc discussions with beneficiaries and community leaders.

12 Except EQs 3,4,9 and 12 that only relate to DSIF at the programme level.

4. MAIN FEATURES OF THE DSIF PORTFOLIO

Background

It is important to note that DSIF is a programme that is not itself a legal entity such as an investment fund or company. There are therefore no accounts or financial reports as such. The only portfolio information is maintained by EKF, which issues the guarantees to the Danish banks that provide loans to governments to finance the projects supported by DSIF subsidies. EKF manages a portfolio of outstanding guarantees to such banks. DSIF itself does not manage its projects post-completion in the same way a development bank or manager of a development-focused private equity portfolio that monitors and tracks development outcomes would. The case studies for this evaluation found that there was little to no post-completion information on development outcomes. MFA covers the cost of managing DSIF operations (analysed in EQ4 JC 4.2). The governance of DSIF is through committees at both IFU (most notably the Investment Commitment) and MFA (Programme Committee and Council for Development Policy). There is, however, no dedicated DSIF board that a development bank would have. Of importance are the biannual DSIF Steering Committee meetings, bringing together IFU and MFA stakeholders.

There has been debate and analysis on whether the way DSIF operations have been, and continue to be undertaken, limits the reach and efficiency of its mixed credit instrument. The February 2020 review of DSIF drafted by MFA that, inter alia, provided the starting point for this evaluation also considered alternatives to the tied aid approach as a means to increase the growth of the DSIF pipeline and the number of countries where it could undertake projects.

Key Features of the DSIF Portfolio

To analyse the DSIF portfolio, it is first necessary to put in context how the DSIF unit, both within MFA and since 2017 at IFU, approaches opportunities.

The only actual DSIF portfolio monitored is the outstanding guarantee portfolio managed by the export credit agency EKF which issues the 95% loan guarantees to the Danish banks (now only DB). The evaluation team learnt that unlike in commercial export credit transactions, EKF as a state-owned entity does not assess the credit quality of proposed projects and issues the guarantees on request of DSIF and MFA.

To analyse the entire portfolio, the team collected and aggregated individual project data provided by DSIF and MFA from 2001 to 2019. Afterwards, the portfolio was validated with DSIF and MFA to ensure its completeness and accuracy. Notably, complete information for the older and completed projects was not always available. As a result, this chapter provides an assessment of trends in the operations of DSIF rather than a conventional portfolio analysis.

Project Volumes

In total, DSIF approved 85 projects in 24 countries (primarily in Asia and Africa) from 2001 to 2019, excluding a relatively small number (under 10%) of approved but subsequently cancelled projects. DSIF financing amounted to DKK 14 billion (an average of DKK 737 million per year), which was broadly divided equally between the 2001-2009 and 2010-2019 periods. It is important to highlight the shift that has taken place from small and medium-size projects to large projects,[13] as Table 2 below shows:

The increase in project size has occurred since 2016. Between 2016 to 2019, the five projects approved amounted to DKK 4.9 billion, an average of almost DKK 1 billion per project.

On average, from 2001 to 2009, DSIF was financing almost seven projects a year with a mean support value of nearly DKK 100 million, while from 2010 to 2019, less than two projects a year were approved with an average value of DKK 454 million.

TABLE 2: DSIF PROJECT VOLUMES

Period	Projects	Amount	Average
	No	DKK million	DKK million
2001-09	69	6,747	96
2010-19	16	7,265	454
2001-2019	85	14,011	163

Source: Particip compilation based on data from DSIF.

13 Currently, DSIF has a minimum financing amount of DKK 100 million.

Geographical Distribution

Table 3 below shows the country distribution. Overall, 52 of the 85 projects (61%) have been in Asia and 24 (28%) are located in Africa. Latin America and Europe account for the remaining seven projects (8%). In the 2010 to 2019 period, there has been a greater focus on Africa, accounting for 10 of the 16 approved projects (63%).

TABLE 3: COUNTRY DISTRIBUTION OF DSIF PROJECTS

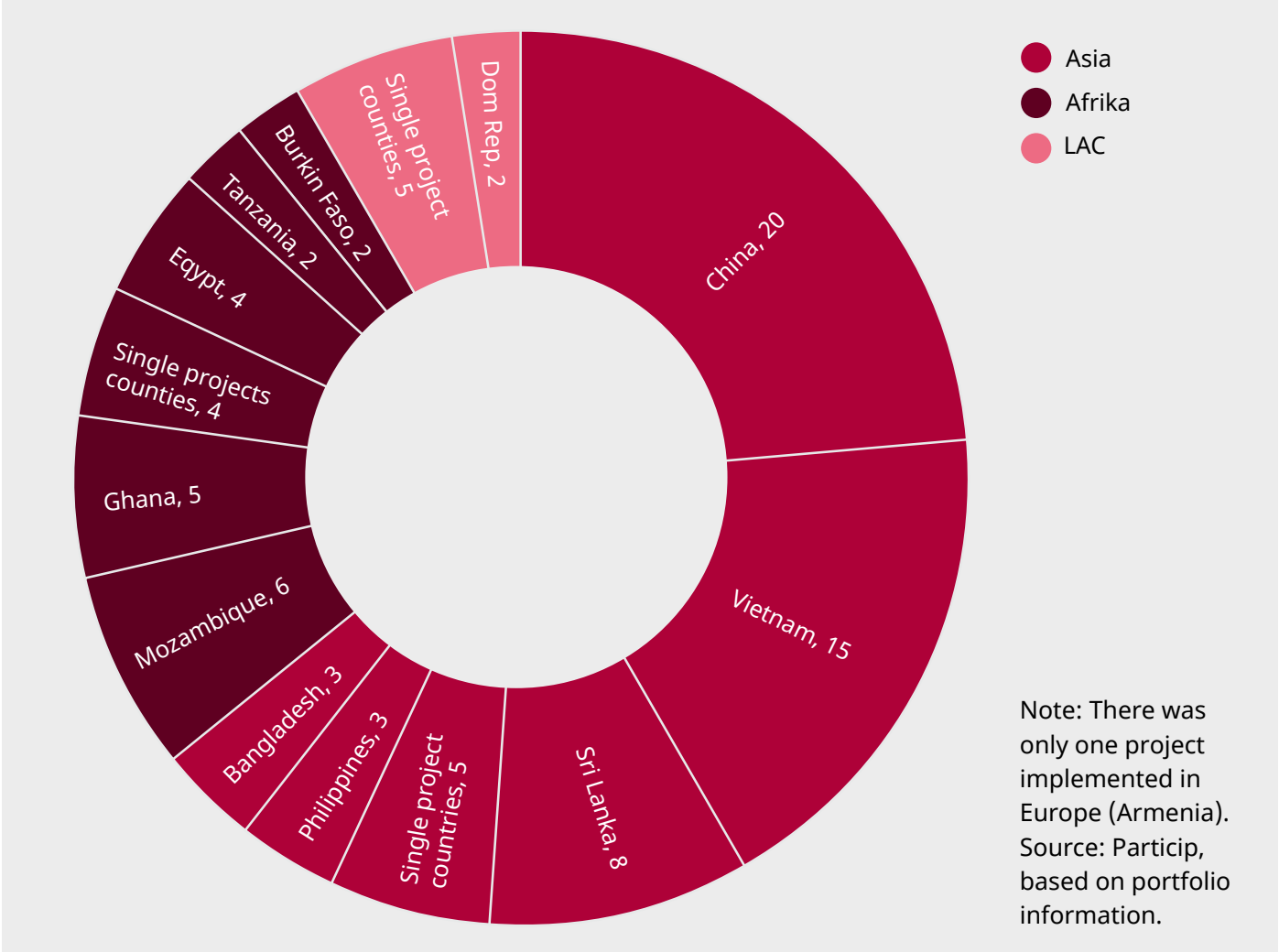
Region	Region/Country	2001-09	2010-19	2001-19	
Africa	Burkina Faso	1	1	2	2%
	Egypt	4		4	5%
	Ghana	2	3	5	6%
	Mozambique	5	1	6	7%
	Tanzania	1	1	2	2%
	Single project countries	1	3	4	5%
Total Africa		**14**	**10**	**24**	**28%**
Asia	Bangladesh	2	1	3	4%
	China	19	1	20	23%
	Philippines	3		3	4%
	Sri Lanka	8		8	9%
	Vietnam	13	2	15	17%
	Single project countries	4	1	5	6%
Total Asia		**49**	**5**	**54**	**63%**
LAC & Europe		**6**	**1**	**7**	**9%**
Total Projects		**69**	**16**	**85**	**100%**
Number of Countries		**20**	**12**	**24**	

Note: Total number of countries takes of account of eight countries that are in the two periods. Single project countries – Africa: Ethiopia, South Africa, Kenya, Zambia; Asia: Bhutan, Indonesia, Maldives, Pakistan, Thailand; LAC and Europe: Armenia, Bolivia, Dominican Republic, Ecuador, Guatemala, Honduras, Nicaragua.

From 2001 to 2009 there was a strong concentration on China and Vietnam, which accounted for almost half the number of approved projects, followed some way behind by Sri Lanka and Mozambique. In the 2010 to 2019 period, there was only one new project in each of these four countries as the focus shifted to African countries. Moreover, only one project (in Bolivia) was outside Africa and Asia in this period.[14]

Overall, DSIF's reach has been limited. In Africa, it has undertaken projects in nine countries, mainly focusing on three: Mozambique(6) , Ghana (5) and Egypt (4). In Asia, DSIF implemented projects in 10 countries, with China accounting for more than one third and Vietnam almost a quarter. In Latin America, there does not seem to have been a particular focus, and in Europe, there was one project in Armenia. Figure 6 provides an overview of the global distribution of DSIF projects from 2001 to 2019.

FIGURE 6: GLOBAL DISTRIBUTION OF DSIF PROJECTS, 2001 TO 2019



Note: There was only one project implemented in Europe (Armenia). Source: Particip, based on portfolio information.

14 It is noted that DSIF is currently processing two projects in Ukraine.

Distribution by Country Income Classes

Table 4 shows the portfolio analysed by country income classifications in the year of approval.

In terms of both project numbers and values, it is clear that there has a preference for low and middle-income countries (LMIC). Over the 19 years, 67% by number and 60% by value of projects have been in LMICs compared with 31% and 38% respectively in low-income countries (LICs). The 2010 to 2019 period had a slightly lower proportion of LIC projects. Over this period, the ratings of the two most important countries in the portfolio were upgraded. Vietnam was upgraded from LIC to LMIC in 2009 and China in 2009 from LMIC to upper middle-income country. As a result, DSIF withdrew from China and Vietnam was deprioritised, and its

TABLE 4: PROJECT APPROVALS BY COUNTRY INCOME CATEGORY

Country Income	Low	Lower middle	Upper middle	Total
2001 to 2009				
No	22	46	1	69
%	32	67	1	100
Value DKK million	2,812	3,912	22	6,747
%	42	58	0	100
2010 to 2019				
No	4	11	1	16
%	25	69	6	100
Value DKK million	2,559	4,542	164	7,265
%	35	63	2	100
2001 to 2019				
No	26	57	2	85
%	31	67	2	100
Value DKK million	5,371	8,454	186	14,011
%	38	60	1	100

Note: Income classification is in year of approval.

project eligibility criteria sharpened. The last project to be approved in Vietnam was in 2013.

In the 2001 to 2009 period, DSIF undertook 22 projects in seven LIC countries, of which ten were in Vietnam. Of the other six LICs, four were in Africa (Burkina Faso, Ghana,[15] Mozambique and Tanzania, and two in Asia (Bangladesh and Bhutan). All four 2010 to 2019 LIC projects were in Africa (Ethiopia, Ghana, Mozambique and Tanzania).

In LMICs from 2001 to 2009, 19 of the 46 LMIC projects were in China, followed by Sri Lanka (8). The other 16 projects were in Asia, Latin America and Europe, except for three projects in Egypt.

Sectoral Distribution

As the table below shows, DSIF works predominantly in two sectors with an increase in concentration over the years: energy (including wind power) and water and sanitation (WatSan).

In 2001-2009, 39 of the 69 projects were in these two sectors. Of the remaining 30 projects, nine were agri-business projects and seven in both telecommunications and transport, with the remaining seven distributed over various sectors. In terms of size, the largest projects were implemented in the transport sector (airports, ports and roads), followed by energy and WatSan. In this period, DSIF supported a number of small private sector sponsored projects but currently only supports public sector projects.

Since 2010, 69% by number and 87% by value of projects were in the two focus sectors, with just two in telecoms. The energy projects were the biggest, with an average DKK 720 million, led by the Assela Wind Farm in Ethiopia, DSIF's largest-ever project at DKK 1.26 billion. On average, DSIF was financing almost seven projects a year with a mean support value of nearly DKK 100 million.

One of the consequences of limiting DSIF support primarily to energy and WatSan is that the number of Danish companies that can participate is more limited and estimated to be under ten companies. This limitation contrasts with the 2001 to 2009 period when many Danish companies were involved in DSIF sectors such as agri-business (including a Danish aquaculture company) and a more comprehensive range of industrial companies.

15 Ghana attained LMIC status in July 2011.

TABLE 5: SECTORAL DISTRIBUTION OF DSIF PROJECTS

Sector	Energy	WatSan	Agri-business	Telecom	Transport	Other	Total
2001 to 2009							
No	18	21	9	7	7	7	69
%	26	30	13	10	10	10	100
Value DKK million	2,332	2,358	273	343	1,837	254	7,397
%	32	32	4	5	25	3	100
2010 to 2019							
No	4	7		2	1	2	16
%	25	44	0	13	6	13	100
Value DKK million	2,845	3,332		459	234	75	7,035
%	40	47	0	8	3	1	100
2001 to 2019							
No	22	28	9	9	8	9	85
%	26	33	11	11	9	11	100
Value DKK million	5,177	5,690	273	892	2,071	329	14,432
%	36	39	2	6	14	2	100

Project Implementation Times

For completed projects, the average time from project approval to project completion (handover to a client) was 6.3 years.[16] Table 6 below shows the averages for the key sectors and the range of durations.

The differences between sectors are modest, with transport projects on average taking three years or 40% longer than agribusiness projects. This difference might be expected given the complicated nature of transport projects that require more physical infrastructure. More interesting is the wide range of completion times which range from as high as 13 years to as little as a matter of months. The case studies revealed that these long implementation periods are mainly due to project complexity and the amount of preparatory work needed (detailed design, tendering and planning, etc.) before the physical implementation can begin. When properly planned and organised, building infrastructure should take two years at most. The projects with the shortest implementation times, such as training, are simple in design and construction or are phase 2 projects where the start-up is relatively straight forward.

TABLE 6: DSIF APPROVAL TO COMPLETION TIMES

Sector	Average (years)	Maximum (years)	Minimum (years)
Water & Sanitation	6.0	13	2
Energy	5.1	11	1
Transport	7.6	11	3
Telecoms	4.7	13	0.5
Agribusiness	4.5	9	0.5
Overall	**6.3**	**13**	**0.5**

Source: Particip, based on project documents.

16 This calculation is approximate as exact approval and completion dates are not available for all projects.

5. MAIN FINDINGS ON INSTITUTIONAL RELATIONSHIPS

Since September 2017, DSIF has operated as a unit within IFU after moving from MFA. Within IFU, DSIF was expected to mobilise more commercial finance and form stronger links with the private sector, resulting in greater development effectiveness and value-for-money of the Danish development cooperation.

Set out below is an overview of how DSIF has fitted into IFU and its institutional relationships with MFA, DB and EKF, all of which are involved in projects.

Investment Fund for Developing Countries (IFU)

The DSIF was initially set up as a unit reporting to the VP Finance Sector and headed by a team leader and was recently moved to become one of the ten investment divisions in IFU under the CIO Investment. This organisational change led to DSIF acquiring greater visibility and stature within IFU, with its head promoted to VP, even though the DSIF team still constitutes a relatively small proportion of IFU's total staff.

Despite the move, the focus of DSIF and IFU remain different. DSIF uses tied aid to support government-owned or regulated public infrastructure and services, while the IFU focuses on private sector projects under different agreement modalities. Consequently, to date there have been no implemented projects involving DSIF tied aid and IFU private sector funding. This difference in focus has also led to DSIF continuing to operate on as a standalone unit within IFU. In this regard, all DSIF projects had to be reviewed and approved by the IFU Investment Committee. However, IFU's approval procedures were designed for the private sector and were not always compatible with the public sector focus of DSIF projects, for example, to qualify for DSIF support projects cannot be commercially viable, whereas IFU projects have to be. DSIF had to comply with IFU's development impact principles and policies, among other things.

At the strategic level, DSIF is governed by MFA and IFU through a Steering Committee which meets bi-annually. The committee members discuss prioritisation of projects, approve IFU's half-yearly progress report on budget and consumption, discuss project progress and results, and assess pipeline development.

Ministry of Foreign Affairs (MFA)

Although DSIF moved to IFU in 2017, the same MFA procedures continue to apply for processing and approving project commitments. This two-layered administration of projects at both IFU and MFA has resulted in additional workloads for DSIF staff, increasing the average processing time. Part of the extra workload is because all projects must be presented to the MFA Programme Committee before feasibility studies start. Subsequently, the project must be presented to the Development Policy Council (UPR), which provides recommendations for project approval by the minister after appraisal. DSIF is a key part of the feasibility phase, ensuring quality assurance and compliance. Nevertheless, the Danida Aid Management Guidelines[17] prescribe that, after the final feasibility study, all projects are subject to a final appraisal that involves a new set of consultants and typically produces a shortened version of the feasibility study, often with limited technical added value. The appraisal process typically prolongs the project preparation phase by 3-4 months and sometimes confuses recipient partners who need to engage with a new team of people addressing mainly the same issues as during the feasibility phase. Since MFA presents the project to UPR and not DSIF, they need to read, understand and adjust the project document to align with current MFA templates and terminology. With a few recent exceptions, MFA has mainly delegated the appraisal task to DSIF and has not participated actively in the process. At the same time, increased MFA participation in the process could have assisted DSIF in achieving a sharper focus on development outcomes.

Stakeholder interviews also revealed that post-September 2017, few people within the MFA understood the particular characteristics of DSIF tied aid projects in order to present and guide projects through the MFA committees during the project cycle. Regarding coordination between IFU and MFA, as discussed above, there are biannual DSIF Steering Committee meetings to discuss prioritisation of projects, approve IFU's half-yearly progress report on budget and consumption, discuss project progress and results, and assess pipeline development. Additionally, there is currently an 'Annual Results Dialogue' with the MFA in which DSIF reports on progress towards development results, assumptions and risks, annual disbursements and budgets for the coming year. This means that MFA effectively retains the overall responsibility for DSIF operations and indemnifies EKF for any guarantee losses, even though operationally DSIF is run by IFU.

Danish embassies have become a major source of potential project opportunities, as the projects have become larger and more public sector-oriented. In the early evaluation period, the involvement of

17 Accessible under https://amg.um.dk/.

embassies was mainly on an ad-hoc basis and based on the portfolio composition. Countries with a large number of smaller private sector projects tended to have less engagement with embassies. In contrast, those with more prominent public sector-focused projects tended to have more embassy involvement. The current DSIF portfolio consists almost exclusively of larger-scale public investments, further increasing the relevance of embassies.

Moreover, MFA has increasingly combined its various instruments and inputs into integrated strategies, aiming to achieve synergies and coherence by applying a holistic approach. This integration has become even more pronounced in the MFA issued 'Guidelines for Country Strategic Frameworks, Programmes & Projects' (2020). The introduction of country strategic frameworks clearly aims at greater policy coherence regarding a given priority country. In this regard, Denmark's entire engagement and strategic direction in a country are presented through a single integrated presentation. Working with embassies thus has the potential to maximise the complementarity and fit of DSIF projects with Danida grant programmes and the coherence with country strategies. The case studies found that several projects in Bangladesh and Mozambique did not fit well with the overall Danida cooperation strategies at the time they were approved. It is also important to highlight that Danish embassies in focus countries traditionally have tended to categorise themselves as either trade or aid focused. Ghana, for example, a few years ago switched from a focus primarily on aid projects using grant resources to trade where the emphasis now is on identifying opportunities for Danish exporters. A likely consequence of a trade emphasis is that an embassy is less likely to be well-equipped and networked to identify tied aid public sector infrastructure projects that may be suitable for DSIF support, although there are Sector Strategic Cooperation (SSC) advisers in embassies who can to provide assistance to DSIF in project identification On the other hand, the transition from aid to trade embassy is usually triggered by higher GDP per capita, which would also imply that DSIF would have to exit the country due to the upper limit of a GDP/capita of USD 4000.[18] The recent relocation of a DSIF staff member to Danish embassy in Kenya (and not the IFU office in Nairobi) can be seen as further strengthening DSIF ties with the embassies and also as means to deliver on the MFA ambitions on greater coherence.

18 This has historically been the case and is also representative for the 20 years of DSIF that is covered by this evaluation. However, the distinction has become more blurred with the increased focus on economic diplomacy at all embassies as well as the introduction of more hybrid instruments such as the strategic sector cooperation.

Danske Bank

Several years ago, three Danish banks provided loans to the sponsors of DSIF projects. Currently, only one of the three, Danske Bank, is extending loans making DSIF vulnerable to a potential withdrawal. DB has, however, a well-developed in-house administrative capacity and is expected to continue its services. Nordea Bank, that previously made about 90% of the DSIF project loans, withdrew because of the onerous Know Your Customer regulations for operations in developing countries.

There is concern about the reliance on DB to provide project loans since this makes DSIF vulnerable to the eventuality that it may withdraw from issuing loans. Moreover, the lack of competition is also a worrying factor from a cost-effectiveness perspective. Finally, the use of a private bank also causes some institutional complexities for borrower countries that are used to a one-stop-shop approach from other development finance institutions that all offer the loan under the same institutional roof.

Export Credit Agency (EKF)

Denmark's official export credit agency provides 95% loan guarantees to DB for the loans it extends to DSIF projects. While EKF carries out a credit risk assessment for each loan guarantee, it does not refuse any guarantee, even if the project does not meet its usual eligibility criteria for credits. This practice is because MFA will cover any losses it incurs (none to date). EKF manages the portfolio of outstanding DSIF related guarantees and provides quarterly reports to DSIF summarising all outstanding guarantees.

EKF may be interested in providing loan and administrative services to DSIF, but as of now, EKF administers only the guarantee part and issues the guarantee to the lender on behalf of MFA.

6. ANSWERING THE EVALUATION QUESTIONS

Evaluation question 1: Relevance

What is the relevance of DSIF for MFA, recipient country government, Danish partners and local stakeholders? Does the DSIF support to preparatory activities contribute to the relevance of DSIF?

To maximise development effectiveness and impact, DSIF-supported projects should align both with MFA's development policies and strategies at global level as well as at local level. MFA's overall global objective has been poverty reduction with increasing focus on ensuring a sustainable and green transition including in fragile states.[19] At local level, MFA has drafted engagement strategies for the Danida priority countries and while DSIF has not consistently been formally part of their formulation, they nevertheless provide a framework that can offer synergies and increase coherence of all Danish engagements at country level.[20] Finally, MFA also has had sector specific policies and strategies, which were especially prominent in the early part of the period, e.g. Danida formulated polices for the water supply and sanitation sector, that also shaped the engagement in Vietnam for both DSIF and classical Danida grant activities.[21] The final 'Danish' issue that is assessed is the balance between export and other commercial opportunities for Danish companies with the optimising the development outcomes and impacts of the projects themselves.

This EQ also assesses the relevance of DSIF against national development policies and strategies of the countries where the projects have been implemented. Again, this includes the overall national development frameworks (e.g. the poverty reduction strategies that were made

19 E.g. the Danida Strategy Partnership 2000 focused substantially on poverty reduction and aid effectiveness measures, whereas both the 2012 strategy – Right to a better life – and the one from 2017, The World 2030 had strong emphasis on cleaner and climate friendly technology. The most recent global MFA strategy The World We Share, from 2021 continues the strong emphasis on fighting climate change but also emphasis the needs of the most fragile countries and the particular challenges including climate related ones.

20 In 2020 MFA introduced country strategic frameworks in the aid management guidelines requiring that the entire engagement and strategic direction of Denmark is represented herein. This to promote higher policy coherence.

21 MFA: Water Supply and Sanitation – Danida Sector Policies, Copenhagen 2000. However, these sector policies were discontinued in the mid-2000s and no replacement was put in place.

in the 2000s and early 2010s) as well as more sector specific frameworks of the countries in question, e.g. the national energy strategy. In this context, the degree of coherence and alignment with other development partners is assessed, if relevant.

JC1.1 Alignment with MFA development policies and strategy

Overall, there is a high degree of alignment of DSIF's projects with MFA's policies and strategies, including global policies and priorities. Almost all projects have a direct or indirect poverty focus and over time they also reflect the increased narrowing of priorities of MFA, towards greener and larger projects increasingly in the public sector. However, there is a significant delay from the formulation of new MFA priorities and policies to the actual implementation in the partner countries. This is due to the long lead time from project identification until project completion, in some cases up to 15 years. A good example of the strong alignment and coherence is Vietnam where Danida had financed urban water and sanitation in the early 1990s. As Danida grant assistance was phased out of the urban sector, DSIF stepped in to fill the gap by focusing on medium-sized towns with still substantial pockets of urban poverty and with some prospects of eventually having cost-recovery of running costs. In some of these cases DSIF was directly building upon previous Danida engagements (e.g. Buon Ma Thout) introducing innovations and scaling up the benefits of the original investment. A bigger and more recent example is in Ethiopia where the Assela wind farm clearly delivers on the global green transition ambitions, but also is highly relevant in terms of creating coherence with other policies and strategies, including those of the Danida strategic sector cooperation in the energy sector. Given its size (~DKK 1 billion) the project has also helped shape the overall Danida strategy in the country and has opened up a wider energy partnership between Ethiopia and Denmark.

There were a few projects where the alignment has been only partially satisfactory. In Bangladesh and Mozambique, for example, there were projects were outside the MFA country strategies and priorities (e.g. airport rehabilitation in Bangladesh and national electricity grid in Mozambique). In Vietnam the issue was of insufficient demonstration and localisation of the development outcomes expected, with many of those sections plagiarised from other projects.

However, the overwhelming evidence indicates a strong alignment of DSIF to MFA's priorities at both global and local level, although, due to long lead times, delays are observable in adjusting to shifted MFA priorities.

TABLE 7: PROJECT LEVEL PERFORMANCE - EQ1

Region	Country	EQ1 Relevance	JC 1.1 Alignment with MFA development policies	JC 1.2 Alignment with national development policies	JC 1.3 Added value Project Preparation Facility	JC 1.4 Compli-mentarity development partners	JC 1.5 Selection projects with higher development outcomes/impacts	Overall
Asia	Bang-ladesh	Saidabad II Water Treatment	●	●		●	●	●
		Saidabad III Water Treatment	●	●		●	●	●
		Upgrading Zia Inter-national Airport	●	●	●	●	●	●
	Vietnam	Ba Dong Drainage and Sanitation	●	●		●	●	●
		Bac Giang Drainage and Sanitation	●	●		●	●	●
		Buon Ma Thout Drainage & WWTP	●	●		●	●	●
		Ha Giang WWTP	●	●		●	●	●
		Lam Son - Sao Vang Water Supply	●	●		●	●	●
		Vi Than Drainage and Water TP	●	●		●	●	●
Africa	Ghana	Environmental Moni-toring Laboratory	●	●		●	●	●
		Rural Fibre Optic Backbone Link	●	●		●	●	●
		Six New Bridges in Northern Ghana	●	●		●	●	●
		West African Fish Project	●	●		●	●	●
	Mozambique	BTN – Phase I	●	●		●	●	●
		BTN – Phase III	●	●		●	●	●
		Reinforcement National Power Transmission Grid	●	●	●	●	●	●
		Dredger Beira Port	●	●	●	●	●	●
		Rehabilitation Region Airports	●	●	●	●	●	●
Desk	Ethiopia	Assela Wind Farm	●	●		●	●	●
	Kenya	Thika Githunguri Water Sanitation	●	●	●	●	●	●
	Pakistan	Faislabad WWTP	●	●	●	●	●	●

Source: Particip.

JC1.2 Alignment with national development policies and strategies take stakeholders' views into account.

In the countries where DSIF operates, there has been close alignment in its projects with national development policies. It has also engaged in extensive stakeholder consultation, although the latter has often been undertaken by consultants especially in the feasibility and appraisal phases, rather than DSIF staff. The increasing focus on larger and public sector focused investment has further intensified the dialogue with local stakeholders and cemented wider partnerships allowing for deeper alignment and also offering an appropriate entry point into policy dialogue on sector specific issues (e.g. in Ethiopia). Vietnam is also one of the country case studies where the alignment has been robust. Here DSIF entered into a framework agreement with the government, where the Ministry of Planning and Investment (MPI) was committed to identify and propose projects to DSIF, which would subsequently screen them for compliance and eligibility.[22] While the framework agreement in Vietnam was rather unique, in Mozambique there was also a strong alignment with country development plans, e.g. the electric grid extension project being derived from the government's Energy Strategy Plan 2009-2013 with the project interventions being identified in this strategy plan.[23]

The only partly satisfactory ratings are from the airport upgrade project in Bangladesh,[24] which was not a part of the government infrastructure plan, but perhaps more an opportunistic opportunity.

In summary there was strong alignment with national policies and strategies, as well as robust engagement of local stakeholders, with especially larger public sector projects often deriving directly from local planning and prioritisation processes.

JC1.3 Added value of Project Preparation Facility (PPF)

Only six out of the 21 case studies made use of the PPF, narrowing the evidence base for this JC. In some cases, there were already incomplete feasibility studies (e.g. in the Thika Githunguri water & sanitation project in Kenya) but the availability of the PPF allowed for more wide ranging

22 There were somewhat similar agreements in China and Sri Lanka where the was a substantial portfolio and pipeline, necessitating the need for managing, prioritizing and ensuring alignment. With fewer and larger projects, the need for such framework agreements has diminished.

23 However, the energy strategy plan was not purely a Mozambiquan product with e.g. the World Bank also assisting in its subsequent refinements, probably increased the technical quality of the plan but potentially also reducing national ownership.

24 Hazrat Shahjalal International Airport.

and in-depth analysis. There was often a greater focus on social and environmental issues as a result of PPF involvement, with some locally financed and procured feasibility studies being mostly technically focused (e.g. the water projects in Vietnam) benefitted.

In the Faisalabad wastewater treatment project in Pakistan, the PPF was able to include human rights-based approaches in the feasibility study that carried over to the implementation, clearly adding value, inter alia, in meeting Danish development objectives. This feasibility report was also part of a larger, city-wide plan for wastewater management and thus covered more than the specific DSIF financed plant. Thus, the PPF may also have been instrumental in catalysing additional finance for other plants and networks.

The PPF is thus a relevant instrument that can leverage additional emphasis on Environmental, Social, Governance Standards (ESG) issues that might otherwise not have been prioritised. The technical quality is also high, but there is clearly also a need to ensure that the ownership of the project preparation process rest with the buyer.[25]

JC1.4 Complementarity with development partners operations and strategies

Note: As already discussed in Chapter 2 on methodology, under OECD DAC criteria, this JC could also be seen as part of external coherence and come under EQ2.

Overall, there is very strong complementarity with other development partners, especially those financing larger infrastructure projects, such as regional development banks (in particular AfDB and ADB) as well as the World Bank. In Ghana's northern bridges project, both the World bank and AfDB had regional connectivity projects in the area, focusing on construction and rehabilitation of roads that further amplified the impact of the bridges. In Mozambique the electric grid extension project clearly complemented the other donors (including past Danida grant projects in the context of the energy sector programme support) and this also translated into detailed analysis of other development partners' strategies and planning that made sure to realize the potential synergies.

25 The evaluation found no direct evidence of ownership being diminished due to the PFF, but the Vietnamese project were all financed by the Vietnamese authorities and the resulting projects were strongly owned by the local authorities.

There are also examples of other development partners financing different phases of the DSIF project, such as the AfDB financing the feasibility of Assela in Ethiopia, whereas ADB has financed several additional phases of water-related infrastructure in Vietnam. While there is limited analysis in the Vietnamese DSIF documentation concerning complementarity, this did not imply increased risk of duplication. Rather it was the MPI that coordinated all donors in the sector allocation different projects among them, thus ensuring centralised, effective and domestic-lead complementarity efforts. This in turn was both a reflection of the strong ownership as well as a further strengthening of this.[26]

JC1.5 Appropriateness of Project selection criteria to identify projects with higher development outcomes/impacts

The degree to which development outcomes are specified, let alone compared with other project's potential development outcomes, varies substantially. Ideally, the development outcomes in infrastructure projects should extend beyond the direct beneficiaries and have widespread indirect benefits economically and socially in a country, but this requires integration into overall development plans if they are to be maximised. Thus, improving the energy grid in rural Mozambique may only catalyse increased business activity if businesses have a stable security and regulatory environment. While appraisal reports refer to development effectiveness, most of the focus is on the achievement of physical indicators (output) such as wastewater treatment capacity, length of electric/telecom networks. Perhaps the most egregious example is from the Ba Don wastewater project in Vietnam, where the DSIF appraisal simply copied the development impact section from another project appraisal, including the number of beneficiaries without changing the name of the city to Ba Don. Clearly this does little to instil confidence in the DSIF consultants' dedication and amount of analytical efforts invested in detailing development impacts. However, this is rather the exception and there are also examples of detailed analysis of the development outcomes and a robust result framework to accompany the analysis that provide for a robust platform for monitoring development outcomes. The Saidabad III project in Bangladesh had detailed the exact number of beneficiaries who would get WHO standards for drinking water in terms of both quantity and quality. Similar types of targets and end dates were set in the Thika Githunguri project in Kenya.

26 Only in the case of the airport upgrade were the suboptimal complementarity, with JICA also engaged in the airport but uncoordinated with DSIF. However, the material impact appears limited.

In conclusion the performance is generally reasonable (two thirds of projects were rated satisfactory), but more efforts could arguably have been invested in improving the analysis of the causal drivers of improved development outcomes, including in most cases better quantification and a more developed ToC. Instead, many analyses are primarily at output level but jump to the impact level, often with limited analysis of how the outputs will be key ingredients in translating their achievements into better development outcomes; the underlying assumptions in the intervention logic may be poorly articulated.

EQ1 Synthesis

DSIF's operations generally complement well those of Danida in terms of delivering increasingly large-scale infrastructure projects that have the potential to deliver robust development outcomes. With accelerating integration into Danida country level strategic frameworks the relevance in likely to remain high. The narrowing of priority sectors and the focus on public sector led investment have also been key drivers for increasing relevance as there are robust synergies between DSIF and other MFA instruments (e.g. the strategic sector cooperation). The same trends in terms of bigger and a more public sector focus has also made the DSIF projects more relevant for recipient governments and there is generally strong integration into national development frameworks. There are indications that the smaller projects, often with more simple technologies (e.g. small water and sanitation projects in Vietnam) had declining relevance as the Danish added value is diminishing with local capacities increasingly being capable of delivering on both price and quality competitiveness.

Relevance in many projects is further enhanced by the complementary engagements by other development partners, that can support other phases of the DSIF project, or amplify the outcomes by constructing connecting infrastructure. However, the ability of DSIF to engage in co-funding with other development partners is constrained by the business model (i.e. tied aid) but some lessons are being drawn from Ukraine.

The most critical area is that of analysing and detailing the development outcomes of DSIF projects, with uneven analytical efforts invested in both the preparation and implementation phase. This is clearly an area where there is room for improvements in terms of increasing the relevance of DSIF and also providing a better framework for subsequent evidencing development outcomes through improved monitoring and evaluation.

Evaluation question 2: Coherency

To what extent has DSIF been able to create coherency with other Danish activities in recipient countries and to Danish development policies?

Denmark is applying an ambitious approach to policy coherence for development in which it seeks to integrate multiple dimensions of development at all stages of policy making. This to foster synergies across policy areas, increase governments' capacity to identify trade-offs between competing interests and, to ensure better coordination.[27] The country strategic frameworks that are now being rolled out in Danida's extended partnership countries increase the emphasis on strengthening coherence thus giving more consideration to all the instruments and types of co-operation. A coordinated approach has been adopted that involves working closely together across development instruments regardless of whether they are managed by an embassy or a department in Copenhagen (as DSIF is).[28]

Until quite recently DSIF was not part of Danida country strategies although, both MFA and DSIF have strived to ensure coherence between DSIF and other Danish supported engagements. DSIF itself can be seen as an attempt to achieve coherence between export promotion objectives and providing development assistance, leveraging Danish competencies and promoting Danish commercial interest while also assisting in poverty reduction in poor countries.

There is a thematic overlap with the first EQ on relevance and alignment; hence the analysis presented in the first question is not repeated here.

JC2.1 Systematic research for coherence with MFA development policies and strategy

Overall, DSIF projects are highly coherent with MFA's development policies and strategies. The degree to which the project documentation explicitly analyses how the projects fits into the policy and strategic frameworks varies, with e.g. the Assela wind farm in Ethiopia being integral part of the overall country programme. The water and sanitation project in neighbouring Kenya, Thika & Githunguri, is also a recent example of strong coherence with both country level and global level MFA policies and strategies. The projects deliver on the Danish government's priority of a green development policy, with emphasis on access to energy and water.

27 See e.g. Danida: 'A shared agenda Denmark's action plan for policy coherence for development' 2014.

28 Danida: 'Guidelines for Country Strategic Frameworks, Programmes & Projects', November 2020.

TABLE 8: PROJECT LEVEL PERFORMANCE - EQ2

Region	Country	EQ2 Coherence	JC 2.1 MFA development policies	JC 2.2 Synergy with other Danish development initiatives	JC 2.3 Danish business links	Overall
Asia	Bangladesh	Saidabad II Water Treatment	●	●	●	●
		Saidabad III Water Treatment	●	●	●	●
		Upgrading Zia International Airport	●	●	●	●
	Vietnam	Ba Dong Drainage and Sanitation	●	●	●	●
		Bac Giang Drainage and Sanitation	●	●	●	●
		Buon Ma Thout Drainage & WWTP	●	●	●	●
		Ha Giang WWTP	●	●	●	●
		Lam Son - Sao Vang Water Supply	●	●	●	●
		Vi Than Drainage and Water TP	●	●	●	●
Africa	Ghana	Environmental Monitoring Laboratory	●	●		●
		Rural Fibre Optic Backbone Link	●	●	●	●
		Six New Bridges in Northern Ghana	●	●	●	●
		West African Fish Project	●	●	●	●
	Mozambique	BTN – Phase I	●	●	●	●
		BTN – Phase III	●	●	●	●
		Reinforcement National Power Transmission Grid	●	●	●	●
		Dredger Beira Port	●	●	●	●
		Rehabilitation Region Airports	●	●	●	●
Desk	Ethiopia	Assela Wind Farm	●	●	●	●
	Kenya	Thika Githunguri Water Sanitation	●	●	●	●
	Pakistan	Faislabad WWTP	●	●	●	●

Source: Particip.

Both projects are part of a wider trend where DSIF has been moving to ever larger investments, in which the coherence and strategic fit is receiving more attention as are impacts and country level strategies and policies. Thus, coherence benefits in terms of having larger and more strategic investments are emerging, albeit that they may also stem from the fact that it is easier for embassies to engage with a few mainly public sector-oriented investments than it is to ensure coherence with numerous smaller projects, as was the case in the first half of the evaluation period. There was, however, a lack of coherence in the project for the upgrade of the main airport in Bangladesh, which did provided little if any coherence with either Danida policies in Bangladesh, or national development priorities. This would appear as one of the more opportunistic projects that were predominant in the mid-2000s.

The water and sanitation investments in Vietnam are an example of what can be characterised as achieving portfolio level coherence. All projects designed in the 2000s are coherent with the sectoral priorities in the Danida strategy for Vietnam (covering both the one from 2000-2005 and the 2006-2010 strategy) which had strong focus on water and sanitation but made, in 2006 a conscious decision to focus grant support on rural areas, whereas DSIF could focus on urban and peri-urban areas. They were also coherent with the Danida water and sanitation policies as well as DSIF own policies.

However, there is evidence to indicate strong and rising coherence of DSIF projects with MFA's policies at both global and local level, with gradually fewer of the small and at times opportunistic projects, instead redirecting focus towards larger, more strategic investments that are designed in closer cooperation with embassies. This has the potential to enhance coherence.

The involvement of civil society in the DSIF approval process, primarily in the UPR, has also improved coherence with MFA's policy ambitions on human rights (e.g. resettlement) and a more robust focus on development impacts, as seen in e.g. the Assela wind farm project. In evolving appraisal and approval procedures greater attention will need to be given to ensuring that civil society engagement meets the non-commercial objectives of MFA.

JC2.2 Synergies/complementarity with other Danish development initiatives

Synergies and complementarity with other Danish development initiatives varied across the sample of 21 projects reviewed. In Vietnam, for example, there was good complementarity in the first half of the evaluation period, when there were a number of DSIF water treatment projects. These complemented the Danida grant programme in the water sector.

In one project, Buon Ma Thout, DSIF was even able to extend the waste-water treatment plant that was initially constructed by Danida grants, in the process introducing new innovative technologies (pond-based treatment). The overall strong coherence in the Vietnamese portfolio was explicitly aimed at in the country strategy papers and generally DSIF delivered on that.

Conversely most of the projects with poor complementarity or synergy were in the older and smaller projects, again the product of the more opportunistic approach that, at times, guided project identification at that point in time.[29] This includes the airport upgrade in Bangladesh which was outside both the country strategy as well as all other Danish development engagements. In Mozambique two projects (one of the rehabilitation of regional airports, the other a new dredger in Beira that sank following a collision) also suffered from limited connections to the bilateral programme and its associated engagements. In Ghana the Environmental Laboratory was developmentally appropriate but did not fit with the country strategy, hence the n/a rating.

Over the evaluation period, however, there is a clear trend to better coherence with MFA's policies and strategies, driven in part by the shift towards larger public sector investments.

JC2.3 Danish business links with beneficiary countries

In all the case study projects, the tenders have been tied to Danish companies, contractors and advisers as that is the core business model of DSIF classic. The model requires DSIF to actively involve the Danish private sector with a view to increase their presence in the countries and promote the technology transfer of Danish expertise. As the number of new project approvals has declined with the concentration on large private sector projects, fewer Danish companies have been involved. Moreover, in construction projects such as water treatment plants while the main contractor is Danish, sub-contracting is widespread which can dilute the Danish content (if not profitability). Nevertheless there are still opportunities for technology transfers and better value for money.[30] Table 9 lists Danish companies involved in the implementation of the 21 case study projects.

29 These projects were also fully within the mandate and sectoral scope of DSIF at that time.

30 Based on field cases studies from Bangladesh, Vietnam, Mozambique and Ghana. Please refer to the project evaluations for more details.

Some of the strongest Danish business links are in the wind sector where DSIF support has given Danish companies a foothold in countries as diverse as China, Philippines, Egypt, Bolivia and most recently Ethiopia.

In Vietnam where there the largest number of water and sanitation projects, there has been general satisfaction with the Danish contractors used. However, there is little evidence that Danish contractors could compete in untied internationally tendered contracts. Moreover, the field visits found that in Vietnam the types of projects supported by DSIF (medium sized plants and networks in smaller urban centres) no longer require international contractors as local firms are becoming capable of delivering the same quality but at a lower price.

Looking forward, opportunities for DSIF and Danish contractors lie in the bigger, more complex water and sanitation projects, such as those in Bangladesh (under construction) and Kenya and Pakistan (where construction is yet to begin). In such projects there are more options for leveraging the specific Danish competencies, have greater potential for promoting Danish investments and exports (including know-how and technology).

The degree to which uniquely Danish business links are established is complicated by the fact that many of the companies in question are highly globalised, with e.g. Kruger, Suez A/S and Siemens Gamesa A/S being part of a larger entities in which design, quality assurance, procurement and sourcing may come from multiple global locations outside Denmark. In addition, there is also the outsourcing (such as the Beira dredger which had limited Danish content) and the use of joint ventures which may reduce the direct promotion of Danish exports.

Overall, it is not clear the degree to which DSIF contracts are helping Danish companies establish t footholds in the countries where DSIF operates. A challenge in using sub-contractors is that quality may suffer as was the case in Mozambique in the regional airports project where the actual work was sub-contracted to a local company that failed to meet the quality standards specified.

Establishing Danish business links is thus inherently challenging as both the local context is changing the competitive landscape and the business dynamics in Denmark also pose both challenges and opportunities. Again, the gradually sharpening of focus on core areas in which Danish technology and know-how are world leading has improved performance over time, but requires monitoring as circumstances change and the value proposition that Danish companies can offer working with DSIF is less compelling.

TABLE 9: DANISH MANUFACTURERS, CONTRACTORS AND CONSULTANTS/ENGINEERS INVOLVED IN 21 CASE STUDIES

Name	HQ	Sector	Employees in Denmark (D)	Projects
Munck Asfalt + Civil Engineering	Denmark	Contracting	213	Airport - Bangladesh Bridges - Ghana
MT Højgaard A/S	Denmark	Contracting	1118	Saidabad II - Bangladesh, Bac Gaing - Vietnam
Degremont S.A. / Suez A/S	France	Contracting	11	Saidabad II - Bangladesh Ba Don, Ha Giang, Vi Thanh - Vietnam
JV E. Pihl & Son / Semco Maritime	Denmark	Construction/ telecoms		Airports - Mozambique
JV Aarsleff/SETH	Denmark	Construction / power supply		Electricity grid - Mozambique
Kruger - Veolia	Denmark / France	Water, climate adapt., soil	386 D + 100k global	Lam Son / Sao Vang - Vietnam
Ramboll	Denmark	Cons Engineer	2857	Airport Bangladesh,
Grontmij / SWECO	Denmark	Cons Engineer	1323	Airport B , Saidabad II B,
EnviClim Net	Denmark	Cons Engineer	1	Saidabad II - Bangladesh,
NIRAS	Denmark	Eng consul-tancy	2,181 global / 1,717 D	Saidabad II - Bangladesh, Water - Kenya,
COWI A/S	Denmark	Cons Engineer	6,682 global / 2,800 D	Fibre Optic - Ghana, Bridges - Ghana, Assela - Ethiopia
Sweco A/S	Sweden	Cons Engineer	1,230 D	Bridges, UMaT - Ghana
Netplan A/S	Denmark	Cons Engineer	Now bankrupt	Fibre Optic II & III, Mozambique
Alcatel-Lucent (now Nokia A/S)	Sweden	Telecom		Fibre Optic - Ghana, Fibre Optic II and III - Mozambique
Desmi Contracting	Denmark	Pumps etc	930 global	UMaT - Ghana
Royal Danish Seafood	Denmark	Aquaculture	Est c50	WAF Ghana
Siemens Gamesa RE	Spain	Wind turbines	C 6,000	Assela - Ethiopia

Sources: Particip, based on EKF information.

EQ2 Synthesis

In the first part of the evaluation period there was more limited coherence with Danish development policies, especially those at country level. That was partly by design as DSIF had a broad mandate encouraging it to enter into many sectors and with both large and small projects. With the increased size and the shift to public sector investment also came an increased engagement with embassies in partner countries. This has also underpinned the rapidly improving country-level coherence with Danida strategies.

Since about 2010 there has been a move to fewer but larger projects that has allowed DSIF to align its operations more closely with other Danish development programmes in-country and work more closely with embassies. Furthermore, MFA now requires embassies to formulate country strategies frameworks that will encompass the totality of Denmark's entire engagement and strategic direction in a country, including those of IFU and DSIF, that should result in better coherence.

The degree to which DSIF has assisted Danish companies to establish permanent business links in the investment destinations is more mixed and more difficult to fully evidence. Danish companies are increasingly more global, forming alliances and mergers through which many aspects of project design and implementation is shifted to locations where competencies and price-competitiveness is located. Moreover, outsourcing is also a key feature of many investments at times to the degree where the Danish company is primarily the contract holder providing quality assurance. There are relatively few examples of DSIF projects leading to the companies winning other contracts, establishing more permanent presence, but clearly, they get exposure, experiences and visibility. Nevertheless, with the focus on large, public sector projects where there may be a higher level of Danish content and knowledge/expertise there may be opportunities for Danish companies to establish themselves in new markets.

Evaluation question 3: Portfolio

How effectively has DSIF delivered with respect to geographical, sectors and strategic concerns for Danish development assistance, including a limited number of (often fragile) partner countries

The answer to this EQ builds on the portfolio review out in Chapter 4.

During the evaluation period, DSIF in general took a transactional approach to projects. Provided a potential project complies with the eligibility criteria (sector, country, size, poverty reduction orientation etc), it may be implemented. Unlike a development bank, there was no strategic portfolio consideration of how a potential project fits within an overall DSIF portfolio of projects. There are, for example, no portfolio concentration limits by sector or country. Consequently, the 'portfolio' as such evolved in a more ad hoc rather than planned way, as suitable projects arise. No consideration was given to how many previous projects may have already been done in a sector or country. This can and has led to a relatively high levels of sector and country concentration of DSIF projects, as happened up to 2010 in China and Vietnam. The only actual DSIF portfolio that is monitored as such is the outstanding guarantee portfolio which is managed by the export credit agency EKF which issues the 95% loan guarantees to the Danish banks (now only DB).

JC3.1 DSIF geographical distribution and evolution

Overall, 52 of the 85 projects (61%) have been in Asia, followed by Africa with 24 (28%). Since 2010 to 2019 there has been a greater focus on Africa which accounted for 10 of the 16 approved projects. Overall, DSIF's reach has been limited. In Africa it has undertaken projects in nine countries, with a particular focus on three: Mozambique six projects, Ghana (5) and Egypt (4). In Asia it has undertaken projects in 10 countries, with China accounting for more than one third and Vietnam almost a quarter. In Latin America there does not seem to have been a particular focus. In Europe there was one project in Armenia.

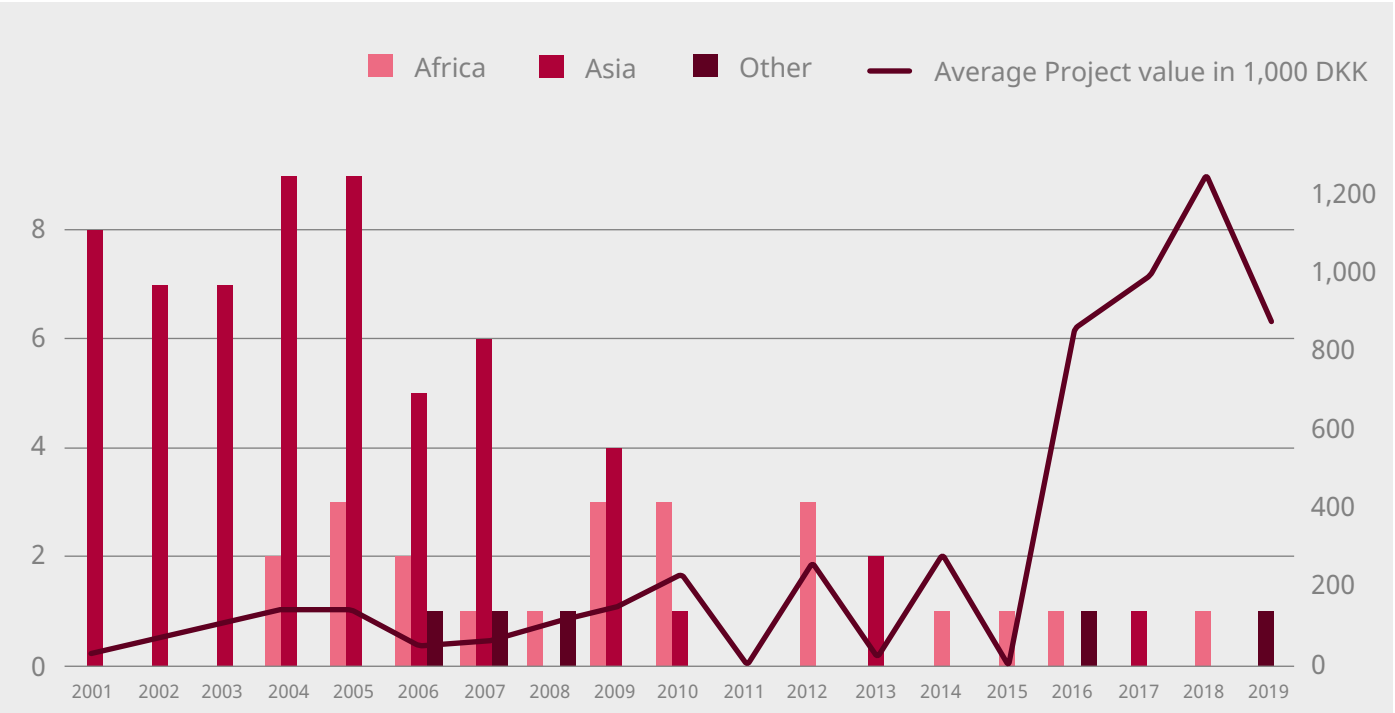
By both project numbers and values, it can be seen that there has a preference for low middle income countries (LMIC). Over the 19-year period 67% by number and 60% by value of projects have been in LMICs compared with 31% and 38% respectively in low income countries (LICs). The 2010 to 2019 period had a slightly lower proportion of LIC projects. Over the period the two most important countries in the portfolio were rerated: Vietnam in 2009 from LIC to LMIC and China in 2009 from LMIC to upper middle income country, neither is now a focus country. In the 2001 to 2009 period DSIF undertook 22 projects in seven LIC countries, of which 10 were in Vietnam. Of the other six LICs four were in Africa (Burkina Faso, Ghana, Mozambique and Tanzania, and two in

Asia (Bangladesh and Bhutan). All four 2010 to 2019 LIC projects were in Africa (Ethiopia, Ghana, Mozambique and Tanzania). Figure 7 provides an overview over the geographical distribution and project values.

JC3.2 Type of infrastructure, evolution and appropriateness

Sectoral Distribution: In the 2001-2009 period 39 of the 69 projects were in water and sanitation (WatSan) and renewable energy sectors (currently the focus sectors), while of the remaining 30 there were nine agri-business projects and seven each in telecommunications and transport, with the remaining seven in a variety of sectors. The biggest projects by size were in transport (airports, ports, and roads), followed by energy and WatSan. In this period, there were a number of small private sector sponsored projects, that today would not be supported. Since 2010, 69% by number and 87% by value of projects were in the two focus sectors. The energy projects were the biggest with an average value of DKK 720 million, led by the Assela Wind Farm in Ethiopia which is DSIF's largest ever project at DKK 1.26 billion. On average, DSIF was financing almost seven projects a year with a mean support value of almost DKK 100 million. A consequence of limiting DSIF support primarily to energy and WatSan is that the number of Danish companies that may participate is much more

FIGURE 7: GEOGRAPHIC DISTRIBUTION OF DSIF PROJECTS VS PROJECT VALUES 2001 TO 2019



Source: Particip, based on portfolio information.

limited and likely to be well under 10. This contrasts with the 2001 to 2009 period when a much larger number of Danish companies were involved in sectors such as agri-business (including for example, a Danish aquaculture company) and a wider range of industrial companies.

JC3.3 DSIF support to Danida/MFA priority sectors and regions

DSIF has delivered on the mandates and policy direction of Danida as regards the portfolio composition and sector focus, as well as the key implementing partners (public not private). It has also delivered on the ambition to focus on cleaner and climate friendly technology, e.g. cleaner water and environment as well as renewable energy (Please see EQ9 for further elaborations.).

EQ3 Synthesis

Overall, there has been a fair distribution of the 85 DSIF projects in 24 countries, principally in Africa and Asia, with less concentration geographically since 2010. There has been a move to larger projects over the last five or so years, resulting in only one or two a year being approved. The focus has been primarily in low-middle income countries, with limited attention having been given to low-income countries and fragile states, as compared to Danida's overall focus and emphasis.[31] There has been a concentration on two sectors: water and sanitation and renewable energy.

31 As discussed elsewhere moving to low-income and fragile countries clearly also entails heightened risk, both in terms of identification, implementation and sustainability.

Evaluation question 4: Efficiency and adaptability

What are the implementation experiences regarding efficiency of DSIF, including the ability to adapt to change, promote new technologies, synergies with other Danish activities and possible DSIF synergy with IFU's role as Fund manager?

JC4.1 Organisational structure, policies and procedures adopted for business operations enhanced timeliness and cost-effectiveness

Management of DSIF Operations

From 2001 to September 2017 DSIF operations were run by a team within MFA. Under the 2017 agreement between MFA and the Investment Fund for Developing Countries (IFU), operational responsibilities were delegated to IFU and the DSIF team moved to IFU's offices. The rationale for delegating the operational responsibilities to IFU was to broaden the scope of DSIF activities, in particular mobilising more commercial finance and private sector expertise with a view to achieving higher development impacts and better value-for-money. MFA retained the policy and strategic responsibilities as well as the project appropriation competence; and bears the full guarantee responsibility for the loan amounts. The cost of managing DSIF operations (analysed in JC4.2) is covered by MFA.

Management of DSIF operations by IFU and MFA has until 2021 being transaction oriented with the primary focus being on the evolution of the project pipeline. Such an approach gave insufficient attention to overall project portfolio development in priority sectors or geographically. In 2021, however, a DSIF strategy was drafted[32] and provided to the evaluation. It was the first evidence of a medium-term planning approach to the evolution of DSIF operations. Of note is that this document includes a 'project justification framework primarily to evaluate project fit with Danish interests and thereby the purpose of DSIF' that generates regional and country priorities based on a nine-point project selection framework. This approach is appropriate and if adopted lead to a more targeted and less ad-hoc approach to project identification. The management and approval of DSIF operations, however, remains fragmented with it being responsible both to IFU and MFA. The integration with IFU and the expected synergies that led to DSIF operations being relocated have yet to be achieved.

32 This draft strategy has not, however, been approved by MFA and, as of now, is an internal IFU document.

Project identification and selection
DSIF projects have to meet nine eligibility criteria set out in the 2020 Guiding Principles for DSIF. Geographically, DSIF can support projects in 23 low-income and low-middle-income countries. Given that DSIF staff were all based in Copenhagen the operating policies and procedures require that there should be close cooperation and coordination with Danish embassies in project identification and liaison with client government ministries and agencies. It was also planned for IFU country offices in two African countries and one Asian country where DSIF can operate to help identify new projects. To date it appears that there has been limited interaction with such offices in the countries where DSIF is active. Moreover, the decision to post a DSIF investment director in the Danish embassy in Kenya rather than the regional IFU office shows that it is embassies rather than IFU that are more important in DSIF project identification (and implementation). It should be noted that there is no actual overall DSIF portfolio management undertaken within IFU. The approach remains transactional and pragmatic in nature. It remains to be seen what the more coherent and planned approach outlined in the draft 2021 DSIF strategy will mean for the evolution of the portfolio. Closer cooperation with embassies, as the posting of a DSIF staff member to Kenya demonstrates, has the potential to enhance the links between Danida and DSIF. Despite this, with only a small team of six officers, there is a limit to how strategic DSIF can be in the identification of projects and in developing a pipeline. Given this, DSIF could work more closely with the strategic sector cooperation programmes managed by embassies to develop opportunities and the project pipeline .

As described in JCs 4.1 and 4.2 above, the case studies found that there was good coherence with Danida's strategic development frameworks and relevance with national development plans.

Programme/project cycle
There are two approaches under which DSIF projects are processed:

- Classic: Tenders are limited to Danish companies where DSIF support has been approved prior to tender. More than 90% of DSIF projects are processed in this way. The four phases in steps in the project cycle of DSIF Classic are shown in Figure 8.

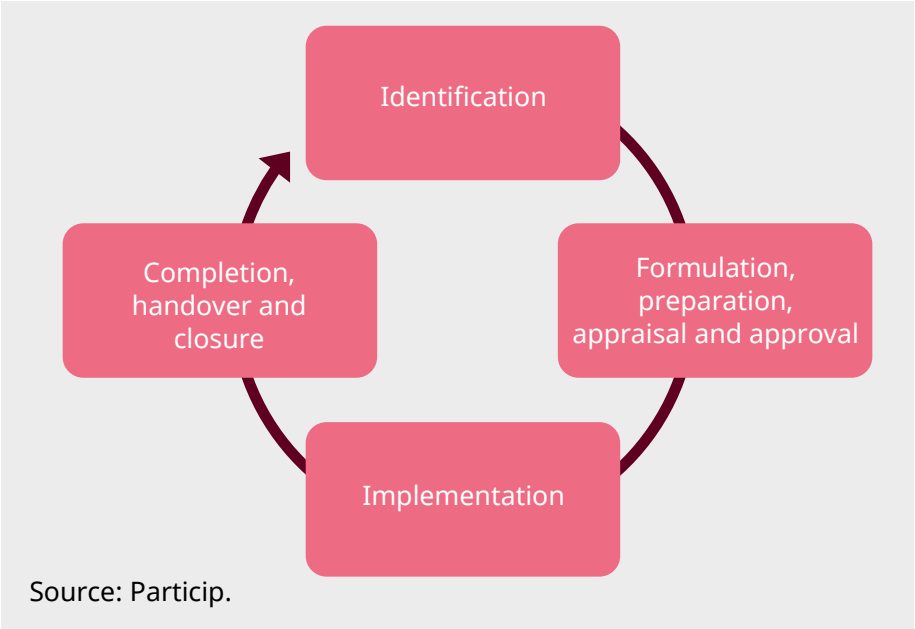
- Fast Track: International tenders where DSIF can provide support in case a Danish company is best evaluated bidder in an international, open procurement process (DSIF support approved after tender evaluation). This process is used occasionally, with only two projects having been approved in the last 10 years. Despite the infrequent use of the fast track approach, it should be noted, that there in such projects there is no need for DSIF project promotion or developments, as the companies approach DSIF after being evaluated as the best bidder. Examples of the fast track approach

in the sample of 21 case studies were the Nokia AS sponsored fibre optic cable projects in Ghana and Mozambique which the company identified and brought to DSIF.[33] Figure 9 illustrates the steps of DSIF project approval, detailing where approvals and clearances are given by IFU and MFA. There follows an assessment of the key features of the project cycle.

Project collaboration within IFU between the DSIF division and the other investment units has been limited. To date only one DSIF project – Mali electricity transmission – was identified by IFU.

It can be seen that concept notes have to be approved by both IFU and MFA. Final project approval is with the Minister for Development Cooperation.. There is an 'Annual Results Dialogue' with the MFA in which DSIF reports on progress towards development results, assumptions and risks, annual disbursements and budgets for the coming year. While in principle there is provision for engagement of an 'Outcome Consultant' by DSIF for ex-post verification of outcome indicators (including development results/impacts) no project specific reviews have to date been undertaken, although some thematic reviews have been carried out. While there may be additional costs arising from both IFU and MFA being involved in the project cycle, overall, the stages in the project cycle are appropriate and similar with those used in other development institutions.

FIGURE 8: PROJECT CYCLE OF DSIF'S CLASSIC APPROACH



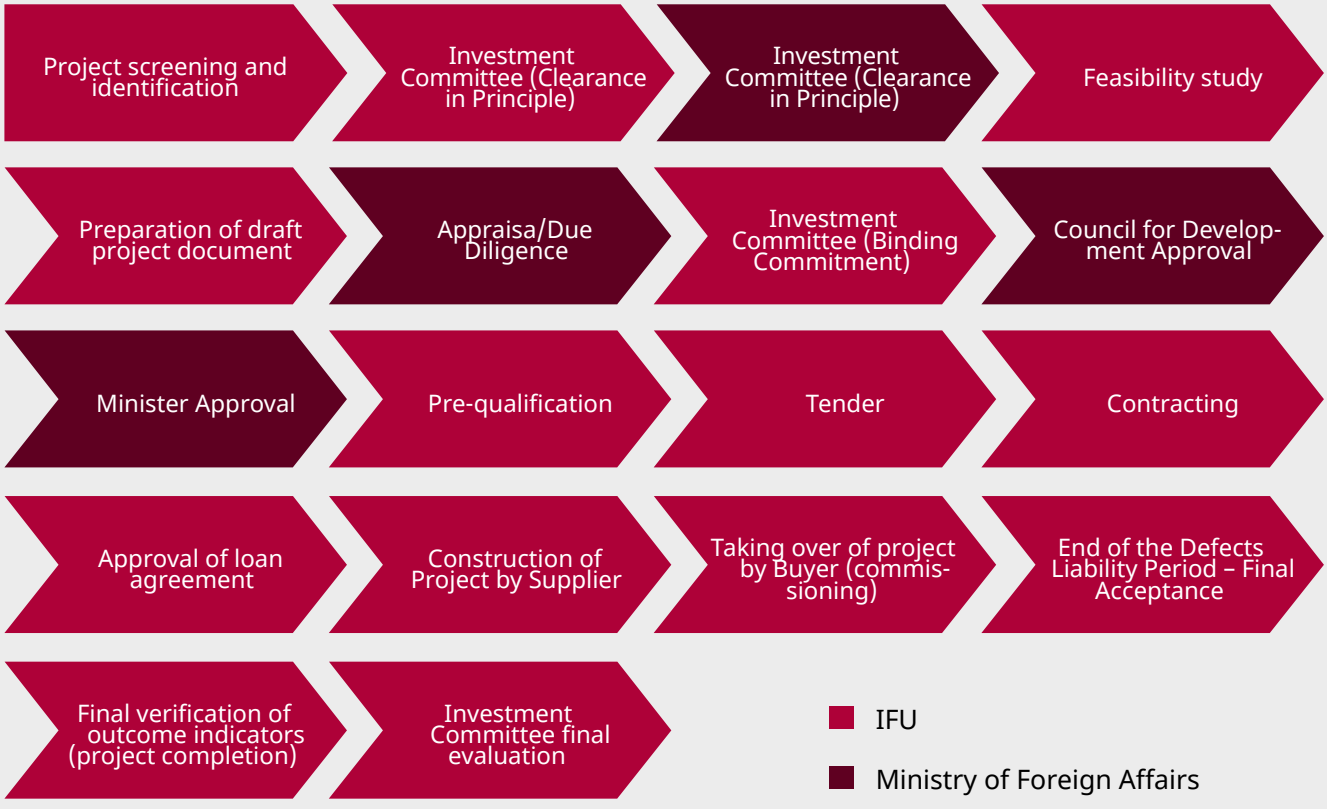
Source: Particip.

33 The Ghana cable project while identified by Nokia, enabled the government to complete its programme to install a fibre optic cable loop around the entire country by filling the missing section along the eastern border with Togo. In addition, there was another Nokia cable project undertaken in Burkina Faso and one is under consideration in Bangladesh.

Financial Management

The key financial management issue that has been analysed in recent years relates to the disbursement of the subsidy to the Danish bank making the loan that typically occurs over the first 2-3 loan disbursements. The rationale for this was to reduce funding costs for the bank, thereby reducing the accrued interest and compensate the bank for the set-up costs in making a DSIF loan. From a cashflow standpoint, however, project disbursements are difficult to forecast and model resulting in significant volatility in ODA grant. It has recently been agreed with DB that DSIF subsidies can be spread out over a longer period of time reducing volatility and thereby efficiency as the planning of disbursements will become more predictable.

FIGURE 9: STEPS OF PROJECT APPROVAL IN DSIF CLASSIC



Source: IFU Guidelines for Project Management - Danida Business Finance.

Financial vulnerability – one bank only
As a result of increased costs to comply with Know Your Customer there is currently only DB that is working with DSIF. Both IFU and EKF have been cited as possible alternatives.[34] The feasibility of either IFU or EKF taking over from DB is unclear and would require further investigation if it appears likely or possible that DB will stop funding DSIF projects.

Project Development Facility (PDF)
To take potentially viable public infrastructure ideas and concepts to a stage whereby DSIF can support them financially there is a project development facility that helps clients prepare projects for financing with funding for feasibility studies which are undertaken by Danish consulting firms. MFA has provided the funding for the PDF through separate budget allocations. DSIF funding for feasibility studies is limited to 75% of the cost with the client required to contribute at least 25%. Even if a feasibility study shows that a project is not feasible and should not proceed, the PDF will have played an important role in stopping investment in 'white elephants' and non-viable projects. In general, the PDF has been deployed in projects that prima facie are suitable for DSIF support. The Project Development Facility enhances the attractiveness of DSIF to project sponsors and provides another potential source of project opportunities greatly, as demonstrated in the Kenya, Pakistan and Uganda water treatment projects.

MFA/IFU Coordination and Cooperation
The rationale for delegating the operational responsibilities to IFU was to facilitate a further development of DSIF in order to mobilise more commercial finance and access private sector expertise with a view to achieving higher development effects and improved value-for-money of Danish development assistance.

Since 2017 there has been a division of responsibilities and roles between MFA and IFU. The policies and procedures that DSIF projects must follow remained broadly unchanged. While having delegated operational responsibility to IFU, MFA approval is required throughout the project cycle. Given that IFU is a state-owned development agency established in 1967, it might be expected that more authority could have been delegated to it in the processing of DSIF projects.

Within IFU, the DSIF team recently became an operating unit headed by a vice president. It is now one of 10 investment units reporting to the chief investment officer (CIO). Given that DSIF supports public sector projects, while IFU is focused on the private sector, it is unsurprising

34 Although DB did not indicate that it was considering an end to DSIF project funding, for contingency planning purposes IFU has given consideration on how to replace DB should it become necessary.

that to date there have been no projects with both public and private sector elements that use both DSIF's tied aid and IFU's private sector instruments. This does not mean, however, that such projects do not exist. In the World Bank Group, for example, there have been projects involving both the public sector oriented IBRD/IDA and the private sector focused IFC, such as the joint IDA-IFC Micro, Small and Medium Enterprise (MSME) Pilot Program for Africa launched in 2003. One of the conclusions of the March 2019 Evaluation of IFU contained a recommendation on achievement of synergies between 'IFU Classic' and DSIF: "Therefore, the new mandate for IFU Classic should indicate the country focus synergies with DBF to be achieved with clear and specific targets (for development outcomes, and for financial and value additionality)". To date there is little evidence of such synergies having been realised.

While embassies are not formally involved in the implementation of project activities, in practice, the DSIF secretariat uses them to contact government authorities, follow-up on issues, push for payment for consultants, write letters, and arrange logistics such as setting up meeting schedules and accompanying visiting consultants and DSIF staff. Moreover, embassies may become aware of implementation problems and issues that they bring to the attention of DSIF. In the Ghana fibre optic cable project, for example, it was the embassy in Accra that learnt of the use of unpaid prison labour that was being used to lay the cable. It played the major role in stopping this unacceptable and illegal practice. It is the view of embassies that there should be closer cooperation between them and DSIF throughout the project cycle from project identification through to completion and handover.

In summary, the organisational structure, policies and procedures followed for DSIF operations are in general reasonable but could be improved. Links and cooperation between embassies and DSIF have not been formalised and vary. As well as identifying opportunities for DSIF, embassies can, inter alia, make DSIF aware of implementation issues and risks that the normal monitoring process may not identify.

JC4.2 Reasonableness of IFU management costs

According to the Annex 1 of 2019 Agreement IFU and MFA – DSIF Oct 2019, 'Administrative contribution - calculation of on-account administration contributions DSIF', IFU is remunerated by MFA for costs of DSIF operations according to the following formula:

Salary content (DSIF team) + Overhead (100 per cent of salary content) + Travel expenses

As already noted in EQ3, there was a shift about 10 years to larger projects. This resulted in an average of only about one project commit-

ment annually since 2014. Administrative expenses are only available for 2017 onwards when DSIF moved to IFU and are shown in Table 10. When this occurred DSIF employed five investment directors (IDs). This increased to six subsequently. A standard metric to assess the productivity of a financial institutions or development banks is to look at the output of loan or investment officer in terms of new approvals/ officer. Over the last six years the IDs collectively only approved one per year, which, prima facie, implying low productivity. This implies that most of the work of IDs is committed to project implementation and not new project generation. It is also generally true that large projects take less time and effort to process and approve than smaller ones because sponsors tend to be more capable and have better management and technical skills in house, Larger projects, moreover, can devote more resources to undertaking feasibility studies that meet DSIF quality requirements

The above table shows the administrative cost as a percentage of the MFA budget committed to DSIF. This budget is to cover the grants and subsidies that are paid out by DSIF principally to the DB, but also to compensate EKF which issues the guarantee. Administrative costs can be seen to have increased significantly, in particular in 2019; the last year for which audited information is available. Based on the trend up to 2019 it is likely that the forecast costs for 2020 and 2021 will be higher than predicted in April 2019.

TABLE 10: DSIF ADMINISTRATIVE COSTS 2017-2021 (DKK MILLION)

Year	**2017**	**2018**	**2019**	**2020**	**2021**
	Est	Audited	Audited	Plan	Plan
Salary for DSIF team	3.75	4.53	5.02	5.00	5.00
Estimated overhead	3.75	4.53	5.02	5.00	5.00
Travel	0.85	1.07	0.62	0.90	0.90
Regulatory costs		0.60	1.65		
Total administrative costs	**8.35**	**10.73**	**12.31**	**10.90**	**10.90**
ODA budget for DSIF	250.00	325.00	350.00	400.00	500.00
Admin. cost in % of the ODA budget	3.34%	3.30%	3.52%	2.73%	2.18%

Source: DBF – next steps presentation, April 2019, audited accounts 2018 and 2019.

It is important to note that unlike development banks which track development outcomes for at least five years post-completion this does not happen in DSIF. It can therefore be inferred that a high proportion of total administrative costs is spent on monitoring implementation from binding commitment to completion and handover. In other development institutions an investment officer's time would be spread more evenly between the three phases of i) new project identification/approval, ii) implementation and iii) development monitoring.

Benchmarking DSIF is made difficult by the absence of directly comparable institutions. In the Netherlands the Infrastructure Development Fund, that is managed by FMO on behalf of the government, has EUR 330 million of assets. The FMO management fee of EUR 8.2 million is equivalent to 2.5% of assets. For DSIF the outstanding guarantees at as June 2020 were DKK 3,823 million, against which the annual IFU management fee of DKK 12 million is equivalent to 0.3%, only a fraction of that for FMO. However, it should be stressed that such a comparison is very approximate. This seemingly very low IFU management fee may in part be explained by the lower number of DSIF projects and the end of monitoring when completion/handover has taken place.

Overall, IFU management costs are not unreasonable for the services provided. There is a case for higher management fees for more in-depth DSIF project services in undertaking more projects and monitoring development outcomes for say five years post-completion.

EQ4 Synthesis

As the two JCs for this EQ are quite distinct, an overall answer to the EQ would add little to the analyses in these JCs and is therefore not included.

Evaluation question 5: Additionality

EQ 5 Does DSIF support investments/projects that would otherwise not have been made, thereby increasing the development effects on the society?

DSIF additionality is the contribution it brings to a project enabling it to be launched and implemented. It must be considered in the context of what other development partners and also sources of commercial finance might have been able to provide and why it was better for the project to have the involvement of DSIF. To assess additionality, it is first appropriate to review what it is and the forms it takes. A general definition was issued in 2016 by the OECD Development Assistance Committee1 (DAC) "[…] an official transaction be considered additional either because of its 'financial additionality' or 'value additionality, or both."[35] Since then, there has been further work on additionality, most notably:

The 2018 MDB's framework for additionality in private sector operations[36] that identified eight types of additionality: i) four types of financial -financing structure; structures and instruments; MDB equity; and resource mobilisation, and ii) four types of non-financial: risk mitigation; policy, sector, institutional, or regulatory change; standard setting; and knowledge, innovation, and capacity building.

A 2021 OECD paper on additionality in blended finance[37] builds on earlier work and research. It concisely states that financial additionality refers to situations where finance is mobilised, and an investment is made that would not have materialised otherwise. It also refers to development additionality as "the development impacts that arise as a result of investment that otherwise would not have occurred" (OECD, 2016[6]). This definition explicitly refers to "impact", which the OECD DAC defines as: "The extent to which the intervention has generated or is expected to generate significant positive or negative, intended or unintended, higher level effects".

The Guidelines for Project Management - Danida Business Finance state that a guiding principle for DSIF '…is to leverage other finance for sustainable infrastructure projects. DSIF funds are supposed to work in places of 'market failure' in developing countries, where it is not commercially viable to invest in important infrastructure for public

35 OECD (2016): Peer Inventory 1: Private Sector Engagement Terminology and Typology. Understanding Key Terms and Modalities for Private Sector Engagement in Development Co-operation.

36 Multiple authors (2018): Multilateral Development Banks' Harmonized Framework for Additionality in Private Sector Operations.

37 Winckler, O., Hansen, H, Rand, J, (2021) Evaluating financial and development additionality in blended finance operations.

TABLE 11: PROJECT LEVEL PERFORMANCE - EQ5

Region	Country	EQ1 Relevance	JC 5.1 Financial	JC 5.2 Non-financial	JC 5.3 Catalytic/ mobilisation	Overall
Asia	Bangladesh	Saidabad II Water Treatment	●	●	●	●
		Saidabad III Water Treatment	●	●		●
		Upgrading Zia International Airport	●	●		●
	Vietnam	Ba Dong Drainage and Sanitation	●	●		●
		Bac Giang Drainage and Sanitation	●	●		●
		Buon Ma Thout Drainage & WWTP	●	●		●
		Ha Giang WWTP	●	●		●
		Lam Son - Sao Vang Water Supply	●	●		●
		Vi Than Drainage and Water TP	●	●		●
Africa	Ghana	Environmental Monitoring Laboratory	●	●		●
		Rural Fibre Optic Backbone Link	●	●		●
		Six New Bridges in Northern Ghana	●	●		●
		West African Fish Project	●	●	●	●
	Mozambique	BTN – Phase I	●	●		●
		BTN – Phase III	●	●		●
		Reinforcement National Power Transmission Grid	●	●		●
		Dredger Beira Port	●	●		●
		Rehabilitation Region Airports	●	●		●
Desk	Ethiopia	Assela Wind Farm	●	●		●
	Kenya	Thika Githunguri Water Sanitation	●	●		●
	Pakistan	Faislabad WWTP	●	●		●

Source: Particip.

consumption.' 'It should be established that DSIF funds are necessary to i) make the project happen and/or ii) increase the development impact of the project.'

For this evaluation, development additionality which broadly deals with ex-post outcomes is not considered under this EQ but dealt with under EQs 6 and 7. Instead the approach taken has been to assess whether either or both of the two forms of ex-ante additionality – financial and non-financial (value: feasibility studies, ESG contributions, capacity building etc).) – can be identified in a project.

Table 11 shows the ratings for the 21 projects reviewed according to the three judgement criteria and the overall additionality ratings.

JC5.1 Financial additionality of DSIF projects

The ratings table shows that 19 of the 21 projects were judged as satisfactory. In these projects there were broadly similar findings. First, the projects were not financially viable and therefore, the ministries or state-owned enterprises (SOEs) could not bear the cost of commercial finance. Second, and related, the concessional finance package offered by DSIF (comprising interest rate subsidies and grants in accordance with OECD tied aid rules) enabled the project to proceed as planned. In these 19 projects DSIF provided nearly all of the project funding, with the remainder coming from the government or SOE. It should be noted that the Danish bank loans that are guaranteed by EKF (typically for 10 years but in some instances up to 15 years) are not structured as project finance in that they are provided to and repaid by governments through their finance ministries so that there is no direct link with a project's cashflows.

Two projects were rated as partly satisfactory and unsatisfactory:

Dhaka Airport Upgrade in Bangladesh – In the appraisal report it is noted that the project would most probably have gone ahead without DSIF. HSIA is a profitable state-owned enterprise that could have covered the cost of the project from the profits of less than two years operations. There was therefore no financial additionality.

West African Fish (WAF) in Ghana – WAF is the only private sector case study. Before DSIF support, WAF had received substantial Danida B2B funding amounting to about one third of the initial investment. This project was being operated commercially. It is possible that commercial funding could have been raised, hence the partly satisfactory rating.

JC5.2 DSIF value (per DAC) or non-financial (MDB's 'Harmonized framework) additionality

The ratings were almost equally split between 11 satisfactory and 10 partly satisfactory. No unsatisfactory ratings were appropriate as non-financial additionality was desirable but not essential provided that there was financial additionality. In the 11 satisfactory projects non-financial additionality falls into three categories. First DSIF provided support for the preparation of feasibility studies through the PPF. In the case of two recent WatSan projects in Kenya and Pakistan, for example, the PPF was used to develop basic studies that were available into comprehensive feasibility studies that meet international technical ESG and commercial standards. Second, there are projects such as Saidabad II in Bangladesh where DSIF supported a full environmental impact assessment. In other projects DSIF ensured that international ESG standards were followed. The third category covers other forms of support during the planning and implementation of projects. The field visits found that the Mozambique telecom company TMCEL which sponsored the two fibre optic cable projects valued highly DSIF support during the pre-implementation phase including advice on ESG and also funded training.

In the other 10 projects there was limited evidence of non-financial additionality.

JC5.3 Catalytic effect – mobilisation of commercial and development bank funding

It is no coincidence that DSIF did not mobilise commercial or development bank funding in the public sector projects in the sample, i.e. 20 of the 21. Two reasons explain this. First, these projects were not commercially viable, i.e. they had negative financial rates of return, hence the need for concessional DSIF funding. Second, these public sector projects were not structured as standalone entities that could raise project finance. Instead while DSIF loans were disbursed to the projects responsibility for the debt servicing, and borrower of record, was the government – through the finance ministry. Had projects been structured for project finance, then it might have been possible to use blended finance with concessional DSIF funding catalysing commercial or development bank loans.

In the only private sector project, WAF in Ghana, blended finance could have been used by leveraging concessional DSIF funding to mobilise commercial or development bank loans. That this did not occur represents an opportunity that was missed, hence the unsatisfactory rating.

In projects in Ukraine that were not the subject of project reviews, it is understood that DSIF is working alongside development partners to co-finance projects.

As well as the mobilisation of other funding, there may be non-financial catalytic effects that occur due to DSIF support. While these have not been systematically assessed in the evaluation, the case studies found a number of instances where this happened. In the WatSan project in Pakistan where construction is yet to begin, for example, the outputs of the DSIF project are expected to contribute to further investment (by French companies) in a wider WatSan improvement programme in Faisalabad where the project is located.

The MFA had the ambition to increase synergies with IFU activities which the transfer of operational responsibility was supposed to facilitate. So far, this aspect has not led to the expected catalytic and/or leveraging effects. While opportunities may emerge in the future, e.g. related to powerlines in relation to energy projects (Mali and Ethiopia), these are still ambitions rather than reality. The move towards large scale public investments has arguably also made synergies with IFU private sector projects more challenging. On the other hand, there is also a need to be careful not to force through synergies where the business case or developmental outcomes may be compromised.

One of the goals of transferring DSIF to IFU was to mobilise commercial finance in DSIF projects. This unrealised ambition has been made even more challenging with the move to larger, public sector infrastructure projects in low-income countries where the Danish commercial sector has historical been reluctant to invest. While the financing for DSIF projects is indeed provided by a commercial Danish bank (now exclusively DB) it is 95% guaranteed by MFA, while also costly to DSIF/ the client, so the leverage is arguably not obtained in any meaningful way. With the current focus and modalities, it would be challenging (and unreasonable) to expect DSIF to leverage commercial capital to be blended with its current streams. On the contrary there could be arguments for in-housing the finance as to make a one-stop shop for borrowers, akin to what development banks do.

EQ5 Synthesis

It was found that at least 19 of the 21 projects would most likely not have gone ahead without DSIF support. Of the remaining two, one (the airport upgrade in Bangladesh) would have gone ahead without DSIF while in the case of the only private sector project it is uncertain whether DSIF support was required. Overall, 14 of the 21 projects were rated as satisfactory, while the remaining seven were partly satisfactory. Scores were higher for financial additionality (19/21 satisfactory) and lower for non-financial additionality (11/21 satisfactory). Financial additionality comprised the concessional nature of the DSIF funding. Non-financial additionality took the form of support for feasibility studies, ESG studies and conditionality, as well as other types of DSIF support in launching projects. In none of the projects was other funding mobilised. In public sector projects this is not surprising as they were not structured as legal entities with borrowings on their balance sheets in which DSIF blended finance could catalyse commercial or development bank funding.

At an overall programme level, the current DSIF focus on public sector infrastructure projects, where DSIF funding involves DB loans to governments, disbursements are actually made to project buyers, but loan servicing is by governments. This is very different from the traditional project finance models where the borrower is the company that is implementing a project. In this model there is a financial structure involving equity investors and a group of lenders. If project finance structures were possible for DSIF projects, then co-financing with commercial and development banks might be easier to achieve, whereby concessional DSIF supported loans would be part of a blended finance package. In projects in Ukraine, that were not the subject of project reviews, it is understood that DSIF is working alongside development partners to co-finance projects. It should also be noted that aside from the issue of the financing structure, DSIF's tied aid model with equipment supply and contracting restricted to Danish companies may not be acceptable to development partners who generally require international competitive bidding.

Evaluation question 6: Impact

What is the impact of DSIF in promoting development effects for the direct beneficiary and to actors, impacted indirectly (unintended)?

There are a number of policy documents and guidelines that address expected development effects. 'Guiding Principles for Danida Sustainable Infrastructure Finance 2020' mandates that monitoring and evaluation (M&E) and results documentation should be based upon four pillars: project identification, screening and appraisal; continuous project monitoring; project performance rating (output/outcome indicators) and ex-post review. The earlier DBF 'Guidelines for Project Management require hiring a consultant to report on outcome indicators for the five years post-completion, although this was never implemented. MFA's 2020 Guidelines for Programmes and Projects (Jan 2020') emphasise the use of a results framework built on baselines (BLs) indicators, targets, and indicators to track the achievement of objectives; in short: define and measure results.

JC6.1 Satisfactory implementation of infrastructure projects

Five of the 21 case study projects are yet to begin implementation (and are thus rated N/A in the matrix above; for one project[38] no information was available, one project is rated 'Unsatisfactory', three are rated 'Partly satisfactory' whilst the others are rated 'Satisfactory'.

- The Vietnam: Ba Dong Drainage and Sanitation project is rated unsatisfactory because implementation has stalled and may not resume.

- Three projects were rated partly satisfactory – (in Ghana: Environmental Monitoring Lab in UMaT and Rural Fibre Optic Backbone Link; and in Mozambique: Backbone Transmission Network)because their operational performance is below planned levels. A field visit, for example, found that the 800 km fibre optic cable in eastern Ghana was laid as planned but is not working in the northeast of the country.

In the satisfactory projects, infrastructure has been delivered in accordance with specified output indicators and to design specifications although some projects have been subject to delays for various reasons including government mobilisation delays and disputes with contractors and suppliers. There was positive feedback form the field visits on collaboration with and support from DSIF during implementation.

38 As a result of a dispute between the local municipality in Vietnam and the Danish partner on the Lam Son water treatment project making a field visit was not possible and the status of implementation is unknown.

TABLE 12: PROJECT LEVEL PERFORMANCE - EQ6

Region	Country	EQ6 Effectiveness	JC 6.1 Satisfactory implementation of infrastructure projects	JC 6.2 Development outcomes	JC 6.3 ESG	JC 6.4 Climate change	JC 6.5 Helsinki principles	Overall
Asia	Bangladesh	Saidabad II Water Treatment	●	●	●	●		●
		Saidabad III Water Treatment	○	●	●	●	●	●
		Upgrading Zia International Airport	●	●	●	●	●	●
	Vietnam	Ba Dong Drainage and Sanitation	●	●	●	●		●
		Bac Giang Drainage and Sanitation	●	●	●	●		●
		Buon Ma Thout Drainage & WWTP	●	●	●	●		●
		Ha Giang WWTP	●	●	●	●	●	●
		Lam Son - Sao Vang Water Supply		●	●	●		●
		Vi Than Drainage and Water TP		●	●	●		●
Africa	Ghana	Environmental Monitoring Laboratory	●	●	●	●	○	●
		Rural Fibre Optic Backbone Link	●	●	●		●	●
		Six New Bridges in Northern Ghana	●	●	●	●	●	●
		West African Fish Project	●	●	●	●		●
	Mozambique	BTN – Phase I	●	●	●	●		●
		BTN – Phase III	●	●	●	●		●
		Reinforcement National Power Transmission Grid	●	●	●	●		●
		Dredger Beira Port	●	●	●	●		●
		Rehabilitation Region Airports	●	●	●	●		●
Desk	Ethiopia	Assela Wind Farm			●	●	●	●
	Kenya	Thika Githunguri Water Sanitation			●	●	●	●
	Pakistan	Faislabad WWTP			●	●	●	●

Source: Particip.

Monitoring/progress reporting, carried out by Danish consulting firms, during implementation went beyond the limited scope of specified output indicators and consisted of regular and detailed conventional technical and financial reporting of (FIDIC) engineering construction contracts, as seen, for example, in the Mozambique electricity grid extension project It is important to note that monitoring ends one year after completion with the verification report stating that there are no outstanding defects.

One cause of project delays may be a change of government that results in a new administration reviewing projects that were approved by the previous administration. In the Ghana Environmental Laboratory project, for example, field interviews found that there were major delays when a new administration wished to reconsider and reapprove the project.

JC6.2 Projects delivered expected outcomes (in targeted beneficiary populations or more widely)

Although loan agreements require that DSIF clients report on outcomes for five years post-completion this does not happen. The field visits were therefore even more important for gathering outcome data. 13 of the 21 projects have been rated as satisfactory, with another five being rated as partly satisfactory.

The challenges of attributing and quantifying outcomes for infrastructure projects vary according to sector. The beneficiaries of WatSan projects are relatively easy to identify as there are pipes linking them to the plants. Longer term health and social benefits that can be attributed to access to piped potable water, for example, are though more difficult to ascertain. For power/energy projects that involve generation or transmission and are part of an electricity grid the beneficiaries are remote and indirect, making it difficult to attribute and quantify development outcomes. For non-toll roads and bridges it is important to have traffic baselines and targets. The outcomes of airport projects are also difficult to ascertain.

Job creation in infrastructure projects is primarily induced or indirect and difficult to attribute and quantify, apart from jobs during construction and the relatively small number of people required to operate infrastructure such as a water treatment plant or a wind farm. In the privately owned fish farm in Ghana more than 90 jobs were created, about double the planned number.

Two examples of projects with positive outcomes are Saidabad II in Bangladesh and Mozambique Regional Airports. Saidabad in Dhaka doubled the capacity of the existing water treatment plant granting access to potable piped water to greater parts of the population.

Saidabad III that is will be double the size of II is necessary to meet growing demand. In Mozambique almost 15 years post-project all three airports continue to be operational despite operational constraints from continuing use of increasingly obsolete/ineffective equipment.

In a number of project documents there were forecast to be social benefits that would, inter alia, help reduce poverty, especially in WatSan projects, such as Saidabad II and III, and Thika water in Kenya. This identification of benefits channelled towards the poor is locally specific in some projects (e.g. Ba Don Drainage and Sanitation is located in Quang Binh, which is among the poorer provinces in Vietnam) whilst other projects have made specific provision for subsidised (or free) connections to potable water supply plus reduced tariffs (e.g. Vietnam: Lam Son, Soa Vang Water Supply Project). Other projects, perhaps less plausibly, suggest benefits will accrue to the poorest people simply by locating the infrastructure in the poorest areas of the country, e.g. the two telecoms projects in Mozambique. (BTN 2 & 3).

The benefits for private sector development are not specifically addressed in project documents. In general, however, better telecoms (fibre optic cables in Ghana and Mozambique) and improved electricity availability and reliability of supply (Mozambique Extension and Reinforcement of National Power Transmission Grid), for example, have the potential to help local SMEs and enterprises to grow more quickly.

For JC 6.2, of the 21 case study projects, three have been rated 'Unsatisfactory':

- In Bangladesh, the Upgrading of Hazrat Shahjala International Airport was unsatisfactory because no outcome indicators or targets were set, output indicators were generic and monitoring and verification reports did not examine implementation in detail.

- In Ghana, the Rural Fibre Optic Backbone Link was unsatisfactory because it is not clear how or if planned development outcomes will be delivered. Currently data traffic volumes are very low. The planned use of 90% of the cable capacity by ministries and government agencies that was forecast in the appraisal report did not take account of public procurement regulations that restrict one part of government buying services from a state owned enterprise such as NITA the owner and operator of the link.

- In Vietnam, Ba Dong Drainage and Sanitation has not been completed and may be cancelled.

In the five projects rated 'Partly satisfactory' outcomes have only partially delivered, e.g. the Environmental Monitoring Laboratory in Ghana is operating at well below planned capacity and is facing major competi-

tion from the world's largest testing company that has been operating in Ghana servicing EML's target mining clients for many years.

For the 10 projects rated as satisfactory field visits found that they were delivering outcomes in line with forecasts set out in appraisal reports. The Bangladesh Saidabad II water treatment plant, for example, has been running at full capacity and its success has necessitated the III project that DSIF is also supporting. In Ghana, the fish project has been in operation for more than 10 years and employs double the planned number of employees.

JC6.3 Environmental, social and governance (ESG) risk management

Environmental impact and social impact assessments (EIAs/ESIAs) in most projects included environmental and social management plans (ESMPs). Compliance with national ESG standards and in some cases international standards, such as those issued by IFC was a requirement for DSIF support. Environmental issues were generally better addressed in DSIF project documents than social and governance issues (although compensation and resettlement issues were covered where appropriate).[39]

Implementation monitoring/progress reporting covers to some extent ESG issues when they are linked to engineering progress (e.g. environmental licensing compliance; delayed access to work sites due to issues of payment of compensation) but these are predominantly technical reports covering contract progress. No specific ESG monitoring reports were available for review in the case study projects.

Based upon available monitoring and reporting information, 17 projects have been rated 'Satisfactory' (including the projects yet to be implemented in Ethiopia, Kenya, and Pakistan where comprehensive ESG impact assessments were prepared). Satisfactory environmental assessments were carried out during appraisal and field visits found that in operation the 14 projects were operating as planned with no adverse environmental or social impacts having occurred. Four projects were rated 'Partly satisfactory' i.e.:

39 An example of a land acquisition dispute occurred in the IFU funded €620 million Lake Turkana Wind Power (TWP) project in Kenya that uses 365 Vestas wind turbines. TWP added 15% to 20% to Kenya's generation capacity. Following a seven-year legal fight, on 19 October 2021 a Kenyan court ruled that the Kenyan central and local government authorities had acquired the land on which the project is situated without following the necessary legal processes. Specifically, the judgement stated that the required consent of the local communities in Marsabit county where it is located, had not been obtained.

- In the Bangladesh airport project, there was a lack of monitoring, verification, and hand-over reports available to judge performance although a meeting with the client indicated no major problems.

- In three projects in Vietnam: (Ba Dong Drainage and Sanitation; Lam Son – Sao Vang Water Supply and Vi Than) there was a limited focus on and monitoring of ESG issues. It was found that project preparation concentrated on technical and financial issues as did the appraisal (both undertaken by consultants).

Overall it is evident that monitoring concentrates on project implementation, predominantly engineering and contract progress. Environmental issues are generally well covered when compliance with an ESMP.

Feasibility studies and appraisal studies normally included metrics of expected positive environmental and social outcomes (in some projects linked to contribution to better governance) as well as identifying mitigation measures for (usually short term) issues expected to arise as a result of construction (such as resettlement, compensation, land tenure, disruption and nuisance, HIV/AIDS & STD vectors, safety issues). All such issues were covered in the ESIA and the ESMP prepared in accordance with national legislation (and international norms) at design and usually updated at the project documents stage. The necessary national ES licenses were granted for all projects. Whilst some of these issues were the direct responsibility of the contractor (in compliance with the approved ESMP) (e.g. minimising nuisance and disruption, safety measures, sensitisation of local population and work force about HIV/AIDS & STD propagation) some other issues were dependent upon government partner action (e.g. land tenure, resettlement, compensation payments) and some issues (and delays) did occur from problems in resolution of such issues. However, the fact that such issues were not the direct responsibility of the contractor (or DSIF) does not suggest any abdication of oversight by DSIF or embassy on these issues and there are examples of active engagement to resolve some problems (in Mozambique and Ghana).

In conclusion there has been good ESG risk management. Most DSIF projects have considered environmental issues with more limited coverage of social and governance issues as far as implementation goes. Monitoring and reporting on implementation progress up to hand-over was generally good but thereafter non-existent such that outcomes, especially expected social (and governance) outcomes cannot be confirmed or quantified from available reporting. This is not to suggest that there are no such positive outcomes – the field visits found that for some projects there are significant beneficial results which are qualitatively evident but have not been formally recorded.

JC6.4 Contribution to climate change mitigation, green and inclusive development

The issues of climate change mitigation, green and inclusive development were not explicitly addressed in some case study projects. Nevertheless, DSIF projects have contributed to green and inclusive development in various ways (especially in WatSan projects by way of energy recovery, renewable power supply and consumption for plant operation, contribution to reducing emissions and reduced water pollution).

All case study projects were expected to deliver social benefits either directly or indirectly. WatSan projects (in Vietnam, Bangladesh, Pakistan, and Kenya) have social benefit components (such as accessibility to potable water supply of improved quality, reduction of water-borne disease, better public health in beneficiary populations, better drainage/irrigation) as do rural electrification components of power transmission projects. Other projects attribute social benefits to expected indirect project outcomes/impacts such as national economic development.

No projects have been rated 'Unsatisfactory', while three were rated 'Partly satisfactory', 1 project N/A, with the other 17 as 'Satisfactory' (17/21). The three partly satisfactory' ratings arose:

- In the Mozambique, two projects were partly satisfactory. In the Rehabilitation of Regional Airports project, no reference was made in documents to potential indirect results of increased airport operations and aircraft movements on Green House Gas (GHG) emissions. In the Beira Dredger project more efficient (greener) port management could result in indirect effects of increased GHG emissions due to increased traffic on the Beira Corridor and burning of coal exported through the port.

- In Ba Dong Drainage and Sanitation in Vietnam there was limited focus on social inclusion (although better flood protection should bring social and economic benefits).

JC6.5 Compliance with Helsinki Principles (HP) for low-carbon and climate-resilient growth

Only eight of the case studies were rated against the HP, five of which are still to be implemented. All eight were rated satisfactory. The other 13 projects predate the HP. Nevertheless, none of the 21 may be considered to be directly contrary to principles of low carbon emissions and climate change resilience. However, it could be argued that some projects supporting the transport sector are facilitating indirect results that may be contrary to these principles by facilitating increased road, air, and sea traffic with resulting emissions. However, as these examples

of potential detriment significantly pre-date adoption of the principles (and none of the flagged negative potentials can be quantified) it is not suggested that such standards should be 'retro-fitted' to these projects such that no project has been rated 'Unsatisfactory under JC 6.5 although 13/21 have been rated N/A because there is no mention of Helsinki Principles in project documentation.

It is noted that WatSan projects should directly contribute to these principles by way of energy recovery and renewable power for plant operations.

EQ6 Synthesis

There is no doubt that DSIF projects have contributed to direct and indirect beneficial development effects, but quantification of such benefits is compromised by the following factors:

- Potential indirect outcomes/impacts are not well articulated in project documents with no specified indicators or targets for what would be project contribution only. It is reasonable to infer that in many infrastructure projects the assumption has been that they are developmentally beneficial and therefore it is not necessary to analyse in detail and define expected outcomes, both direct and indirect.

- Limited attention is given in a DSIF project documents to defining detailed direct outcomes targets and indicators. In some projects, outcomes are quantified in general terms (e.g. beneficiary population). The majority of project documents, however, do not consider the wider development benefits of DSIF projects. Indicators are most often generic and provided limited insight into effectiveness and outcomes.

- There is little collection of baseline information against which project-induced change could be compared.

- There is no ex-post reporting on outcomes after project completion and handover (or ex-post evaluation).

That being said, implementation/construction of DSIF projects has a high success rate, in some cases overcoming delays,[40] quality issues

40 In most projects, appraisal reports are much too optimistic as to how quickly a ministry or government agency can move to enable project implementation to begin. In Ghana, for example, government approvals for the Environmental Laboratory in a university were delayed after there was a change in the government requiring a new regulatory application to be made.

and contractual disputes (although such implementation issues are not considered to be untypical of similar infrastructure development projects). Monitoring and reporting of implementation progress up to completion and handover, carried out by Danish consulting firms hired by DSIF, have gone beyond the limited scope of specified output indicators against which verification reporting has certified completion and handover.

There are examples of projects directly targeting the poor (e.g. access for the first time to a potable water supply, such as in Dhaka Bangladesh, or improved rural access to telecom services in Mozambique) but there are also examples of less plausible assertions of attribution of benefits simply by locating the infrastructure asset in an area of higher poverty, such as in rural telecoms.

Coverage of environmental issues has been to a high standard and no issues of direct long-term negative environmental impacts have been detected. Coverage of social and governance issues has been lighter but again, no serious detrimental effects have been flagged.

A few, perhaps unintended, (moderately) adverse environmental outcomes are noted (although the level of potential detriment cannot be assessed with available monitoring information) involving facilitation of increased GHG emissions (from increased road and air traffic and potential burning of exported coal).

In sum, DSIF has clearly underinvested in the tracking of impacts, including the crucial one of poverty reduction, which has also compromised this evaluation's ability to fully document outcomes in that space. While the focus on the technical and operational performance of projects - inputs, activities and outputs is clearly warranted, it should be backed up by greater attention to and tracking of development outcomes beyond the completion and handover of projects, for a period of five years is required, both from an accountability perspective but also from a learning one. The partial, anecdotal evidence from our field studies suggests that there are significant positive outcomes currently un-reported.

Evaluation question 7: Balance

Has DSIF achieved an acceptable balance between the original focus on commercial outcomes and the later focus on achieving sustainable development interventions as part of Danish development efforts?

Several policy documents and guidelines refer to commercial and developmental outcomes. IFU's 2019 Sustainability Policy states that IFU finances private sector investments on commercial terms in developing countries and emerging markets.[41] In contrast, DSIF's 2020 Guiding Principles state that DSIF seeks to contribute indirectly to poverty reduction 'by contributing to sustainable and transformational change in developing countries', by softening the terms of commercial loans for investments primarily in public infrastructure. They also refer to expected development effects of DSIF investments which are expected to be compliant with the 'principles for project selection and assessed on sustainability criteria, including IFC performance standards and UN guiding principles on ESG.

The ratings for projects reviewed are set out in the table below. Excluded are the five projects that are yet to be built or completed.

JC7.1 Satisfactory development outcomes (using DAC definition of impact)

Comparison of ex-ante/ex-post development outcomes is difficult because of the limited scope of specified outcome indicators and the lack of ex-post reporting. During the field visits, attempts were made to overcome this difficulty and confirm ex-post development outcomes, information on which had not otherwise been reported to DSIF. The field visits concluded that for some projects there are significant but unquantified development outcomes. Out of 16 completed case study projects nine are rated 'Satisfactory', five rated 'Partly satisfactory', and two are rated 'Unsatisfactory'. Some examples of such outcomes identified during field visits for projects rated 'Satisfactory' are given below:

- Bangladesh: Saidabad WTP II – DWASA was found to be doing a good job in delivery of affordable potable water to poorer parts of Dhaka (which gives confidence for Saidabad III to also deliver its planned intended development benefits).

- Mozambique: BTN 2 & 3 – capacity of the network was found to be 'good, stable, robust and resilient' and that the volume of data being transmitted in some parts of the network exceeds expectations)

41 By implication, IFU private sector project operating policies cannot apply to DSIF.

TABLE 13: PROJECT LEVEL PERFORMANCE - EQ7

Region	Country	EQ5 Relevance	JC 5.1 Financial	JC 5.2 Non-financial	JC 5.3 Catalytic/ mobilisation	Overall
Asia	Bangladesh	Saidabad II Water Treatment	●	●		●
		Saidabad III Water Treatment	●	●		●
		Upgrading Zia International Airport	●	●		●
	Vietnam	Ba Dong Drainage and Sanitation	●	●		●
		Bac Giang Drainage and Sanitation	●	●		●
		Buon Ma Thout Drainage & WWTP	●	●		●
		Ha Giang WWTP	●	●		●
		Lam Son - Sao Vang Water Supply	●	●		●
		Vi Than Drainage and Water TP	●	●		●
Africa	Ghana	Environmental Monitoring Laboratory	●	●		●
		Rural Fibre Optic Backbone Link	●	●		●
		Six New Bridges in Northern Ghana	●	●		●
		West African Fish Project	●	●	●	●
	Mozambique	BTN – Phase I	●	●		●
		BTN – Phase III	●	●		●
		Reinforcement National Power Transmission Grid	●	●		●
		Dredger Beira Port	●	●		●
		Rehabilitation Region Airports	●	●		●
Desk	Ethiopia	Assela Wind Farm	●	●		●
	Kenya	Thika Githunguri Water Sanitation	●	●		●
	Pakistan	Faislabad WWTP	●	●		●

Source: Particip.

and existing capacity cannot handle demand in some areas (e.g. Vilanculo and Chibuto areas). Development outcomes from the use of the fibre optic network include decreased data transmission costs and permitted government decentralisation facilitated by increased internet access.

- Vietnam: Ha Giang – despite there having been fewer connections than expected significant development objectives are being achieved (if not fully documented) such as health and productivity outcomes especially in poor areas. Similar positive outcomes were observed in Bac Giang.

In the five partly satisfactory projects there is some but insufficient information to assess outcomes. The two unsatisfactory projects were in Ghana: Rural Fibre Optic Backbone Link and Environmental Monitoring Laboratory at UMaT. Both projects are performing poorly with internet traffic volumes and mining testing levels being much lower than planned. It will be difficult for either of them to become commercially viable businesses. In both cases the business models set out in the appraisal reports had major flaws. In the fibre optic cable project the AR did not take account of the law in Ghana that stops one government agency buying commercial services from another agency. The model is based on NITA (the telecom regulator and operator of the cable) selling 90% of the capacity to government ministries and agencies in towns along the route in Eastern Ghana, something that has not happened. In the UMaT project account was not taken of the presence of the world's biggest testing company SGS[42] that has been operating in Ghana since 1960 and serves many of the mining companies that UMaT was targeting. Moreover, much of the testing equipment at the Laboratory does not meet the required quality standards and it is unable to compete with private sector testing services.

JC7.2 Strong ESG performance of DSIF projects

Despite an absence of specific reporting on ESG issues in monitoring and verification reports most projects aim at delivering direct and indirect ESG benefits. Project documents identified only modest risks of ESG short term negative impacts. Conclusions on ESG performance are based on assessment of performance of completed projects (if reported) and/or as confirmed during field visits compared with expectations based upon examination of coverage of ESG issues during project preparation.

42 https://www.sgs-ghana.com/en/our-company/about-sgs/sgs-in-brief/sgs-in-ghana.

On this basis and noting the evaluation finding that DSIF demonstrates added value in coverage of ESG, out of 16 case study projects, nine were rated 'Satisfactory' and seven 'Partly Satisfactory'. In the satisfactory projects there was clear evidence of significant positive ESG effects. For the seven partly satisfactory projects there was limited evidence of ESG effects. In the Bangladesh airport upgrading there was a lack of ESG data. In Ghana it is too early to assess whether the environmental laboratory will help raise ESG standards in the mining industry. Also, in Ghana the fish farm has in recent times had to deal with pollution and fish diseases with a negative effect on productivity in Lake Volta. There was a lack of ex-post ESG performance data for the phase 2 telecom project in Mozambique and two Vietnam projects (Ba Don and Ha Giang). Improvements in ESG performance are also discussed in JC 8.3 below.

JC7.3 Satisfactory financial returns and portfolio performance

Given that case study projects were found to be commercially non-viable (and thus dependent upon DSIF financing to go ahead) but economically viable (positive economic rates of return) the justification for DSIF support was that soft loans and grants would allow projects to cover operating and maintenance costs. Three themes recurred in the case studies: a lack of financial performance data, doubts about tariff levels being adequate to meet operating costs and payment delays for services provided.[43] The example of tariff levels is a classic trade-off between development policy (low tariffs for water and electricity make them affordable to low-income groups and thereby widen access to infrastructure services) and utility financial sustainability.

Only four of the 16 case studies were rated 'Satisfactory', eight 'Partly satisfactory' and four 'Unsatisfactory'. Differences in financial performance between satisfactory and partly satisfactory projects are principally due to the varying degrees of revenue generation or commitments to cover costs. In contrast, the unsatisfactory ratings were due to one of two factors. First the two Ghana projects (fibre optic cable and laboratory) have failed to establish the commercial, profitable businesses that were key features of how they would operate. In the other two (Bangladesh airport and Mozambique fibre optic 2) there is no financial data on which to judge performance.

43 In some projects where tariffs are too low to even cover operating costs (e.g. Assela Wind farm in Ethiopia and Thika Water in Kenya) appraisal reports refer to the relevant government departments being willing to consider increases so that the utilities can at least cover operating costs. Such indications, however, are vague as they are not time bound or specific and appear to have been made to assuage the concern of the consultants preparing feasibility studies and appraisal reports.

EQ7 Synthesis

The increasing focus on development outcomes and less on commercial outcomes is appropriate provided that the infrastructure projects themselves are able to cover operating and maintenance costs which may involve government subsidies and other support. There is a trend towards DSIF enhancing/maximising development outcomes and strong ESG performance in its projects, at the expense of financial/commercial viability. In Ghana Roads and Bridges, for example, there are no revenues and the costs of maintaining the infrastructure will be covered from the 'Road Fund'. In Ethiopia, for the Assela wind farm to be commercially viable electricity prices that the government has set at very low levels to be affordable to low-income groups, would need to be several times higher; something that is unlikely to happen. In summary, development effectiveness considerations dominate project selection in DSIF with commercial/financial viability being of secondary importance.

Field visits and interviews found that projects have delivered planned outputs which continue to be operational (although not all operate as effectively as expected) thus delivering direct and indirect development objectives only some of which are being reported. The older case study projects focussed more on commercial outcomes than more recent projects, but this is not to suggest that development outcomes were not considered in those earlier projects. As already noted, a major challenge in tracking outcomes is that project reporting ends one year after project completion. Moreover, the vast majority of appraisal reports do not specify or define project appropriate indicators. Instead, the focus is on output indicators. There is thus a lack of ex-post information about development and commercial outcomes both of which were essential components in project justification.

Meetings with stakeholders during field visits have confirmed that significant development outcomes are being delivered albeit not necessarily reported and in some projects they were only partially documented. Commercial outcomes are variable ranging from limited usage of project infrastructure (e.g. Ghana: Rural Fibre Optic Backbone Link), limited effectiveness (e.g. Mozambique: Beira Dredger reportedly operating at only 35-50% capacity before sinking), extensive usage but poor revenues (e.g. Mozambique: BTN 2 & 3 – due to non-payment by government institutions) to initially shaky financial and O&M performance some of which is being turned around by actions by the operating institutions (e.g. Vietnam WatSan projects)

Evaluation question 8: Sustainability

Have DSIF projects been economically, socially, and environmentally sustainable?

The sustainability requirements for DSIF projects are prescribed in several guidelines and policies for DSIF. The 2018 MFA Guidelines for Programmes and Projects, requires consideration of sustainability during project preparation. In addition to the importance of long-term outcomes in IFU's 2019 Sustainability Policy there is a particular emphasis on ESG (Environment, Social and Governance) issues. The 2020 Guiding Principles for DSIF 2020 requires projects to be assessed for sustainability, notably ESG, long-term socioeconomic benefits, and institutional capacity to operate and manage a project. Although there are these policies, it is important to note that DSIF does not actually track whether projects achieve sustainability since no data is collected on performances one year after completion (i.e. the end of the no-defects period). Accordingly, the evaluation field visits were an opportunity to ascertain for the first time whether projects have been sustainable, especially those that have been operating over the medium to long-term. The table below sets out the sustainability ratings for the case studies. Ratings cannot be given to six projects that are yet to completed.

JC8.1 Level of economic viability

Economic viability estimates were made for all projects at appraisal stage and project documents had to include ex-ante positive economic rates of return (ERRs). As already noted, there was no quantitative data ex-post to compare likely ERRs with ex-ante figures Accordingly the evaluators gathered in the field whatever information was available, in many cases this was limited and provisional as projects varied in how long they had been in operation. As can be seen in the above table, of the 15 completed case studies, eight were rated 'Satisfactory', five 'Partly satisfactory' and two 'Unsatisfactory'.

All case study projects aimed to increase utility capacity, supply and/or service covering WatSan, electricity generation, supply and transmission, data transmission, testing services, air, road and maritime transport infrastructure and food production. All completed projects have delivered specified outputs and all such outputs are reported to be functional, albeit some are not operating at the expected effectiveness. Consequently, a certain increase of service is confirmed even if specified outcomes are not being reported or quantified. However, higher levels of production should be linked to higher levels of access (to the service or product) for successful project outcomes. For example, WatSan projects in Bangladesh and Vietnam offer clearly increased access to potable water and/or sanitation services whilst the rural electrification component of the Mozambique grid extension offers the first access to electricity in several parts of the country. A widespread challenge,

TABLE 14: OVERALL PROJECT LEVEL PERFORMANCE - EQ8

Region	Country	EQ8 Relevance	JC 8.1 Economic	JC 8.2 Commercial/ financial	JC 8.3 ESG	Overall
Asia	Bangladesh	Saidabad II Water Treatment	🟡	🟡	🟢	🟡
		Saidabad III Water Treatment				
		Upgrading Zia International Airport	🟢	🟡	🟡	🟡
	Vietnam	Ba Dong Drainage and Sanitation				
		Bac Giang Drainage and Sanitation	🟢	🔴	🟡	🟡
		Buon Ma Thout Drainage & WWTP	🟢	🟡	🟢	🟢
		Ha Giang WWTP	🟢	🟡	🟢	🟢
		Lam Son - Sao Vang Water Supply	🟢	🟢	🟢	🟡
		Vi Than Drainage and Water TP				
Africa	Ghana	Environmental Monitoring Laboratory	🔴	🔴	🟢	🔴
		Rural Fibre Optic Backbone Link	🔴	🔴	🟢	🔴
		Six New Bridges in Northern Ghana	🟢		🟢	🟢
		West African Fish Project	🟢	🟢	🟡	🟢
	Mozambique	BTN – Phase I	🟡	🟡	🟢	🟡
		BTN – Phase III	🟡	🟡	🟢	🟡
		Reinforcement National Power Transmission Grid	🟢	🟡	🟢	🟡
		Dredger Beira Port	🟡	🟡	🟡	🟡
		Rehabilitation Region Airports	🟡	🟡	🟡	🟡
Desk	Ethiopia	Assela Wind Farm				
	Kenya	Thika Githunguri Water Sanitation				
	Pakistan	Faislabad WWTP				

Source: Particip.

however, is squaring financial viability with tariffs that are affordable by low-income communities. It remains to be seen whether the three fibre optic cables in Ghana and Mozambique deliver their goals of faster and cheaper access to the internet and telecom services.

Four of the eight satisfactory were WatSan projects in Vietnam that benefited from committed project buyers who were determined to make them work and there was evidence that this was likely to be successful. In Bangladesh the state-owned operator of the airport confirmed that the taxiway improvements and other work had to been to a high standard. In Ghana the fish farm is still operating 10 years after completion and employs nearly double the planned number of people. The recently completed road bridges project in Ghana was satisfactorily handed over. In Mozambique the additions to the electricity grid are generally working as planned.

Four of the five partly satisfactory projects are in Mozambique. The two fibre optic cable projects are affected by large arrears for telecom services from the government. The dredger in Beira port sank following a collision just three years after it started operations. The rural airports still have traffic levels that are much too low to be viable. In Bangladesh, economic viability of the Saidabad II project is still impacted by low water tariffs.

The two unsatisfactory projects were both in Ghana. The Rural Fibre Optic Backbone Link has very low traffic volumes and lack of connection to government institutions and private telecom operators in rural areas six years after completion and raises serious concerns about economic viability. The Environmental Monitoring Laboratory lacks modern testing equipment and faces strong competition from established private testing companies and is not economically viable.

JC8.2 Level of commercial/financial viability of infrastructure

The appraisals of the case study projects found that none were financially viable and thus required DSIF funding to go ahead. As noted in 8.1, a challenge in most projects is between low tariffs, that are affordable by low-income groups and higher tariffs which will make a utility less depend on government transfers and subsidies to cover operating and maintenance costs at the expense of affordability in low-income groups. In several case studies (the WatSan projects Vi Than, Buon Ma Thout, Ha Giang in Vietnam, and the wind power project in Ethiopia) the appraisal reports discuss commitments by governments to raise tariffs over unspecified time periods. However, raising tariffs is difficult and politically sensitive especially in LICs as can be seen from the experience of the state-owned electricity utility EDM in Mozambique which continues to struggle to raise tariffs, unless they are directly linked, for example, to increased access to power or water.

In general, the projects can be divided into two categories when assessing financial viability. First are those projects that are part of integrated infrastructure networks, such as i) water treatment plants that are connected to piping and other infrastructure, ii) power projects that either feed electricity into a grid or add transmission and distribution capacity, or iii) airports. In these examples the projects as such have no dedicated revenues and cannot be considered as standalone projects. In the second category are integrated (stand-alone) projects such as the three fibre optic cable projects in Ghana and Mozambique, as well the Ghana environment laboratory where revenue and costs can be linked.

Of the 15 completed projects, one (Ghana roads and bridges) has no revenues and so is excluded. Of the remaining 14, two are rated 'Satisfactory', nine are rated 'Partly satisfactory' and three rated 'Unsatisfactory'. The Lam Son WatSan project in Vietnam is rated satisfactory as it is well run and is being expanded. The Ghana fish farm continues to operate 10 years after completion and employs nearly double the planned number of people.

A number of common themes can be seen in the partly satisfactory projects:

- A lack of financial information on project performance.
- Insufficient revenues to cover operating costs.
- Large arrears in payments for services.

Two of the three unsatisfactory projects in Ghana (rural fibre optic cable and environmental laboratory) were planned to be standalone profitable businesses but this has not happened. In Vietnam the viability of Vi Than has been severely compromised by fewer connections than originally foreseen (i.e., significantly less sources of revenue than planned).

JC8.3 Level of improvements in ESG achievement

Although there is limited reference to ESGs in monitoring and verification reports, many projects are aimed at providing direct ESG benefits e.g. WatSan projects providing increased access to clean drinking water and reduced pollution, rural electrification providing new access to electricity supply and bridge works providing greater rural accessibility, mobility and connectivity. In other projects the ESG benefits are indirect (e.g. fibre optic networks offering access to information, expansion of business and learning opportunities and greater outreach for e-government). Appraisal report generally refer to gender issues, particularly in WatSan projects, including reduced gender imbalance (in connection with piped household water access). In the

Ghana fibre optic cable project, compliance with Danish ESG principles was tested in 2017 when the embassy learnt that unpaid prisoners were being used in installation of the cable by a sub-contractor of the Danish subsidiary of Nokia which was supplying the cable. At the embassy's request the use of prisoners was stopped. This is an example of a Danish embassy learning about inappropriate practices that neither DSIF staff in Copenhagen nor the monitoring consultant it hired, and who made regular project visits, were aware of.

ESG performance was a key focus area in the field visits. As already noted, DSIF non-financial additionality in ESG is a major strength and this is evident in ESG sustainability ratings. 10 of the 15 completed case study projects are 'Satisfactory' with the remaining five 'Partly satisfactory' as discussed below.

- There was a lack of ESG information on the airport projects in Bangladesh and Mozambique, with the latter having also being damaged by recent cyclones.

- Pollution in Ghana's Lake Volta on which the fish farm is located has in recent years adversely affected operations.

- Project management on the Vietnam: Bac Giang paid insufficient attention to ESG issues during construction.

- The dredger in Mozambique sank after a collision three years after it started operations and is still being repaired.

EQ8 Synthesis

DSIF does not actually track whether projects achieve sustainability since no data is collected on performances one year after completion. DSIF's focus instead has been on the construction and handover of projects, which in most projects was successfully achieved. There is no information on outcomes: so that questions such as have projects reached target beneficiary groups over the medium to long-term cannot be answered definitively. At the output level, projects have mostly delivered the planned infrastructure facilities and services. Indirect benefits are similarly being delivered albeit that they are weakly identified in specified outcome indicators such as better public health or rural accessibility.

Ratings are therefore based primarily on field visits by the evaluators during which, inter alia, there were interviews with project buyers and visits to project sites. The 15 completed DSIF projects reviewed have had a mixed performance as regards sustainability overall, with five being 'Satisfactory', eight 'Partly satisfactory' and two 'Unsatisfactory'. ESG sustainability scored highest which is consistent with DSIF's demonstrated strength and commitment on these issues. Economic sustainability was mixed, often adversely affected by low user fees or tariffs (which have been set to be affordable to low income groups) and a failure to implement and operate projects as planned. Financial sustainability was the weakest (as would be expected given that DSIF only finances projects that are not commercially viable and bankable). In addition to the generally weak financial condition of project buyers, revenues directly attributable to DSIF projects mostly fell short of forecasts. Moreover, some appraisal reports discuss planned tariff increases as being likely to occur despite low tariffs being necessary for low-income groups to pay for potable water and electricity and what appear to be only vague and unenforceable indications to raise tariffs by governments.

Evaluation question 9: Mandate fulfilment and institutional learning

To what extent has DSIF fulfilled its mandate and the policy directions of MFA? Also, what is the institutional learning with respect to raising the needed commercial capital for investments?

DSIF has been financed from Danish development assistance, and must comply with the 2012 law on international development cooperation[44] which states that the paramount objective is poverty reduction. In addition, the law also states that Danish aid should promote human rights, democracy, and sustainable development. There was a greater (rhetorical at least) commitment to poverty reduction in the first half of the evaluation period as can be seen in in core documents such as appraisal templates, guidelines, and annual reports.[45]

JC9.1 Balance between a policy-driven and a demand driven investment portfolio

In general, DSIF has complied with the policy directions as Figure 13 illustrates. There has been a clear shift towards public infrastructure between 2001-2009 and 2010-2019 with water, sanitation and energy increasing substantially whereas no agribusiness projects were financed in the last decade. Agribusiness is a sector dominated by private operators and hence its phasing out as a DSIF sector is clearly consistent with the shift in focus towards public investment. The share of projects in the transport sector has declined from 24.8% to 3.3% of the funding during the last two decades, probably also reflecting successively reduced Danish price-competitiveness in e.g. simple road and bridge construction, as well as limited green potential. The energy sector has also increased, driven by fewer but larger projects, not least Assela in Ethiopia. This is part of a broader trend of fewer but larger projects being approved, currently about one a year. Thus, in the 2001-2009 period there were 69 projects with a combined value of DKK 7.4 billion giving an average project size of DKK 107 million. In the 2010-2019 period there were 16 projects worth DKK 9.0 billion, resulting in an average size of DKK 440 million.

Consequently, DSIF has delivered on its mandates and policy direction as regards the portfolio composition and sector focus, as well as the key implementing partners (public not private). It has also delivered on the

44 Government of Denmark: Law on international development cooperation, 2012.

45 Compare e.g. the DSIF Strategic Framework (2008) with the Guiding Principles from 2020.

move to focus on cleaner and climate friendly technology (e.g. cleaner water and environment as well as renewable energy).

Delivering on the allocation from MFA: DSIF has seen increased annual allocations from MFA, from around DKK 300 million in the 2000s to DKK 400 million in the most recent (2021) finance act, itself reduced from DKK 500 million partly because of COVID-19 and associated cuts to development aid. The Finance Act 2021 projects around DKK 400 million annual allocations to DSIF until 2024. However, due to a combination of factors, including economic contraction in especially Africa, heightened debt service burden and increased competition, the pipeline may not be sufficient to absorb the allocations in the coming years which could result in major challenges to DSIF's in terms of maintaining a healthy and substantial portfolio. It may be that the comparatively narrow policy-induced focus on public investments in energy, water, and sanitation in Danida priority countries pose aa challenge going forward as demand may be waning.

JC9.2 Achievement of mandate

The mandate of DSIF has remained largely unchanged over the past 20 years, namely providing access to finance for development projects in developing countries, tied to the transfer of technology and knowhow through Danish companies, primarily mediated by Danish contractors.[46] The mandate on eligible sector was initially rather broad and included both support to private companies (e.g. agribusinesses, industrial companies and service sector) and the public sector (e.g. water and energy companies, education, health and media). In that sense, DSIF delivered on the promise to support a diversity of sectors and organisations (including private companies). Nevertheless, there has also been a concern about the evidencing of outcomes in terms of Danida's overall objective of poverty reduction and the associated cross-cutting issues and hence call for better alignment with those priorities.[47] Danida's overall policies did however change from the late 2000s onward. The Danida-commissioned Africa Commission in 2009 recommended more focus on energy and water supply in 2009. In 2012, the Danida strategy 'Right to a better life' translated this broad recommendation into firmer policy direction for DSIF which was requested to focus on larger, cleaner and climate friendly technology that made infrastructure more resilient. Finally, the 2017 made it clear that focus would now be on public investment in infrastructure.

46 See e.g. MFA: 'Brief Guidelines Concerning Danida's Mixed Credit Programme for Developing Countries' Copenhagen 2001.

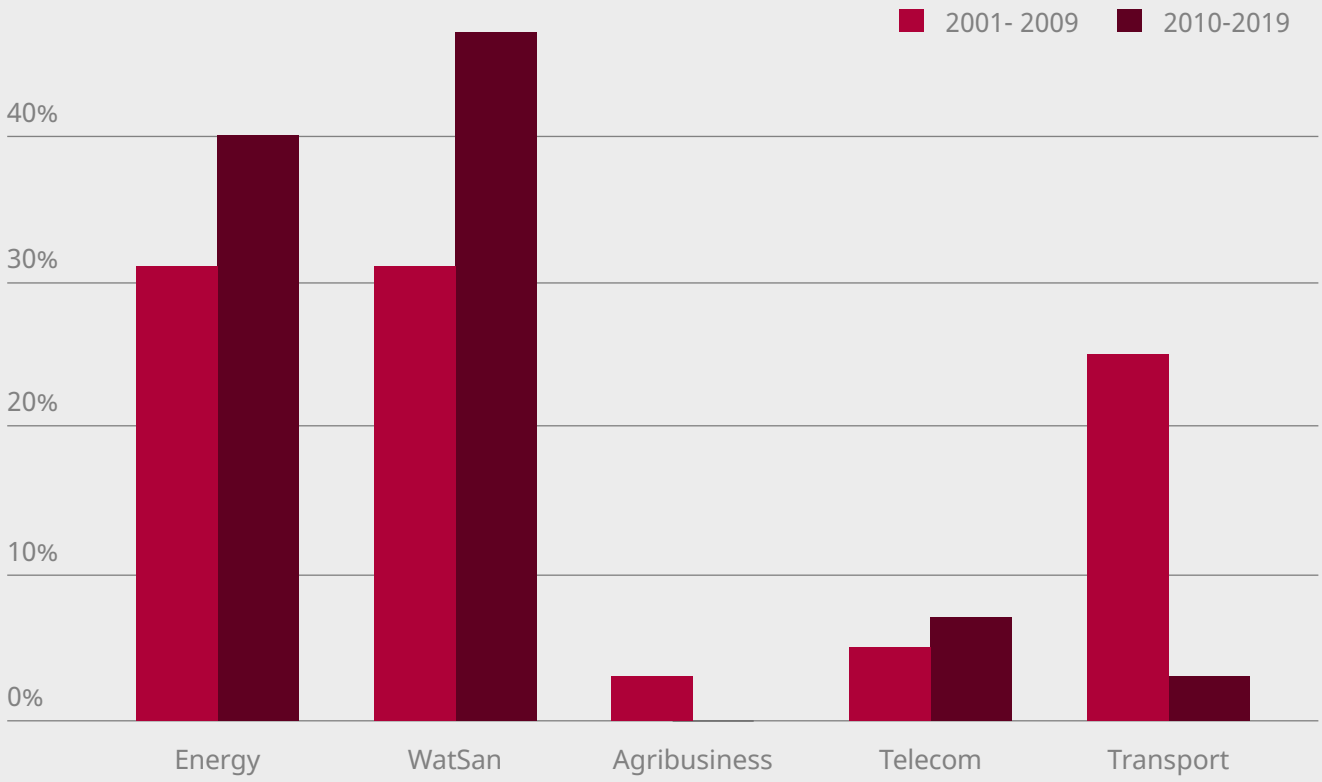
47 E.g. the DSIF Annual Report from 2006 called for strengthened application of Danida development aid effectiveness testing (skærpede bistandsprøvning), meaning that the project should have stronger synergies to purely grant based Danida programmes, especially in Africa, thus reinforcing the poverty reduction impacts.

EQ9 Synthesis

In general, DSIF has complied with the DSIF specific policy directions from MFA. There was a clear shift towards public infrastructure after 2010 to 2019 with substantial increase in water, sanitation, and energy projects whereas no agribusiness projects were financed in the last decade. It is however the case that the projects that have been financed in recent years are even more dependent on concessional finance and grants. In none of the 21 case studies was there co-financing. Instead DSIF provided very high proportions of the funding required for projects with governments contributing relatively small amounts.

A key issue that reoccurs in this report, as well as the Court of Auditors report of 2014 (and even in the preceding evaluation of DSIF from 2001), is that of delivering on the overall objective of poverty reduction through sustainable development. The projects included in the evaluation were all based on a logical framework of varying depth (and later a ToC), but not systematically tied to a results framework that would evidence how project objectives will be achieved through a hierarchy of planned results

FIGURE 10: DSIF SECTOR FUNDING BY VALUE DURING THE LAST TWO DECADES



Source: Particip, projects not in the principal sectors excluded.

as MFA general (but still DSIF applicable) aid management guidelines emphasise.[48] There is no overall DSIF results (discussed in EQ11) although there are plans to include DSIF in the overall IFU results framework.

While project buyers are contractually obliged to report on the core outcomes five years after hand-over very few have done so and DSIF does not require compliance. While there have been limited attempts to assess the development outcomes of the projects, these have also suffered from very limited evidence on outcomes and impact. The 2010 review of Water Supply Systems in Vietnam financed by DSIF, for example, was generally positive on both coverages and sustainability, whereas the 2013 review of DSIF water project in Sri Lanka argued that it was 'likely that there has been a positive health impact, but hard data to proof of this are not at hand.'[49] Moreover three of four reviewed projects in Sri Lanka had serious sustainability issues. Similarly, the court of auditors (Rigsrevisionen) where it was argued that 'it was challenging to ascertain if DSIF's projects contribute to delivering on the objectives of MFA, as they are formulated in the MFA's strategies and the overall goal poverty reduction.

This evaluation offers more evidence on development performance, with some projects, especially in Vietnam having reasonably good outcomes in terms of improving health among both poor and non-poor (with limited targeting) but more mixed results in other countries. However, these findings are also based on physical observations and only limited evidence produced by DSIF is available. What assisted DSIF in delivering on its developmental mandate in Vietnam was the strong alignment to the national policy framework which in turn had strong ownership by the partner government at both local and central level. Replicating this in e.g. sub-Saharan Africa is clearly challenging as the institutional contexts differ substantially, but there is arguably a need to accelerate efforts that aim at gaining better insights in what drives better development outcomes and how to better adapt to the local contexts.

48 MFA: Guidelines for Programmes and Projects, July 2019 (currently being updated to better reflect the DDD agenda). The consultancy NCG did develop a framework for implementing a results framework for DSIF in 2018, but that was not implemented.

49 PEM: 'Review of small towns water and sanitation under Danida's mixed credits - Vietnam' 2010 and PEM: 'Review of water supply and sanitation projects financed under Danida Business Finance, 2013.

Evaluation question 10: Risk management

Is the risk management of DSIF appropriate at all stages of the project cycle in the context of current and future investments? What is the future optimal balance for this?

In assessing DSIF's risk management it is important at the outset to reiterate that DSIF is a Danida programme, managed by IFU,[50] and not a legal entity. DSIF does not have a balance sheet and is not a bank or fund. Instead, the only portfolio is that of the outstanding guarantees which are issued by the export credit agency EKF to DB.[51] DB at the request of DSIF extends 10 to 15 years soft loans to client governments to finance public sector infrastructure projects[52] that involve Danish equipment and/or Danish contractors, as well as Danish consultants and consulting engineers. Such loans are 95% guaranteed by EKF, which in turn is counter guaranteed by MFA that bears the ultimate contingent liabilities. A key principle is that no financial risk is borne by either DSIF or EKF. This is achieved by requiring that all loans are sovereign obligations of the countries in which projects are undertaken.[53]

Risk analysis and management of DSIF projects are conducted according to the MFA's Guidelines for Programmes and Projects. Specific risk policies and procedures are set out in the 2013 Guideline to Risk Management.[54] More recently there are the 2019 Danida Financial Management Guidelines. In 2020 the Fragility Risk and Resilience Analysis Tool[55] was issued. All risk management by DSIF is conducted at a project level in terms of identifying the critical areas that may delay or weaken implementation and project sustainability.

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50 DSIF is one of a number of Danida programmes managed by IFU which also has its own investment portfolio.

51 Until a few years ago, two other banks Nordea Bank and, to a lesser extent, ABN AMRO also made loans for DSIF supported projects. They withdrew primarily because of more stringent Know Your Customer (KYC) standards set by banking regulators.

52 Up until about 10 years ago DSIF undertook a relatively small number of private sector projects in agribusiness, industry and other sectors that were not guaranteed by governments. Private sector projects also received loans from Danish banks that were guaranteed by EKF and underwritten by MFA. Where possible, counter guarantees from private local banks were required.

53 In the case of private sector projects guarantees were sought from strong local commercial banks. There is one public sector project, a wind farm in Bolivia, where there is not a sovereign loan.

54 These set out tools for risk management including identifying, assessing, monitoring, making decisions on and communicating risk issues in programmes and projects supported by Danida. Risk is divided into three categories: contextual, project/programme and institutional. It mandates the use of a risk management matrix to monitor risk on a continual basis during implementation.

55 The fragility dimensions measured are political, economic, societal, environmental and security.

TABLE 15: PROJECT LEVEL PERFORMANCE - EQ10

Region	Country	EQ10 Relevance	JC 10.1 General project risk manage-ment	JC 10.2 ESG risk management	Overall
Asia	Bangladesh	Saidabad II Water Treatment	●	●	●
		Saidabad III Water Treatment	●	●	●
		Upgrading Zia International Airport	●	●	●
	Vietnam	Ba Dong Drainage and Sanitation	●	●	●
		Bac Giang Drainage and Sanitation	●	●	●
		Buon Ma Thout Drainage & WWTP	●	●	●
		Ha Giang WWTP	●	●	●
		Lam Son - Sao Vang Water Supply	●	●	●
		Vi Than Drainage and Water TP	●	●	●
Africa	Ghana	Environmental Monitoring Laboratory	●	●	●
		Rural Fibre Optic Backbone Link	●	●	●
		Six New Bridges in Northern Ghana	●	●	●
		West African Fish Project	●	●	●
	Mozambique	BTN – Phase I	●	●	●
		BTN – Phase III	●	●	●
		Reinforcement National Power Transmission Grid	●	●	●
		Dredger Beira Port	●	●	●
		Rehabilitation Region Airports	●	●	●
Desk	Ethiopia	Assela Wind Farm	●	●	●
	Kenya	Thika Githunguri Water Sanitation	●	●	●
	Pakistan	Faislabad WWTP	●	●	●

Source: Particip.

Two general concerns have arisen in recent years regarding DB:

- the dependence of the DSIF programme on just one bank, especially as commercial banks are becoming more reluctant to grant loans to developing countries due to increased compliance and Know Your Customer requirements that apply to financial institutions.

- with increasing attention on low-income countries with very low credit ratings, DB is considering asking for the 95% EKF guarantee to be raised to 100% in those projects it judges as too risky, as even the 5% residual risk would be too high.

JC10.1 Quality of risk management systems and policies on long-term sustainability

DSIF's risk management is principally at the project level and through the cycle from identification through feasibility studies (if required), appraisal, approval and then to approval implementation and completion. The only programme wide (portfolio) risk management is undertaken by EKF which issues brief reports on the portfolio of outstanding guarantees that it issues at the request of DSIF. Unlike a bank or investment fund DSIF does not maintain consolidated information on its overall portfolio and is not able, for example, to easily access information on the number and amount of projects in a country or sector. Instead its primary focus is on those projects being appraised or under implementation. For this evaluation the evaluation team had to construct a portfolio based on information for all projects undertaken (approved, under implementation and completed) provided by DSIF and MFA.

Project documents include sections that systematically deal with risks and how they can be managed and mitigated. There are three main risk categories: i) contextual risks concerning the general risk factors in the country; ii) project risks related to achievement of objectives; and iii) institutional risks in relation to the interests of Denmark and its partners. Good risk screening of projects will help identify weaknesses in the way a project has been formulated and should allow for improvements in the design, and crucially how it is to be implemented. It enables DSIF to boost its non-financial additionality and increase the probability of successful implementation and long-term developmental sustainability.

A common weakness in project risk assessments is a tendency to accept at face value assurances that governments will raise tariffs of WatSan services or electricity to levels that allow the public sector utility to reach or move closer to financial viability at least at the operating level, for example in the Assela Wind project. Such assurances by governments and regulators are general vague and not contractual, making given that sizeable tariff increases will render water or electricity unaffordable and

therefore unlikely to occur. There is also a general tendency to be overly optimistic on how quickly a project can be implemented, specifically the capacity of a government and/or state-owned agency to move quickly for construction and implementation to begin. A possible contributory factor for delays is inadequate project preparation and planning, although the case studies did not identify specific examples of this. Delays in the construction phase are less frequent unless a dispute or unforeseen event occurs.

The ad hoc opportunistic approach to identifying and appraising projects means that there is no consideration of how a project fits with an overall portfolio, something that is routine in a bank or investment fund. Specifically, there are no limits on portfolio concentration by sector, client, country income or geographically. In the period 2001 to 2009, in particular, 40 (58%) of the 69 projects approved were in just three countries (19 in China, 13 in Vietnam and eight in Sri Lanka). In the period 2010 to 2019, however, the portfolio has been much more geographically diversified.

Another challenge that has arisen in recent years is the move to a focus on fewer high value projects; typically, one large project per year is being processed so if it has a problem then there are potentially large negative consequences. In the case of Ethiopia, DSIF's single largest approval is the Assela Wind Farm 1 that is moving towards implementation. The concentration in Ethiopia may even increase as Assela 2 has been cleared in principle. Apart from the increased risk of so much in one country with one sponsor there is also the matter of DSIF's resources for other projects in Africa and Asia being depleted, so that rationing may become necessary. The issue of concentration has recently been recognised to an extent within DSIF as the more systematic approach to project identification set out in an internal document, the draft 2021 DSIF Strategy presentation, shows.

In terms of credit quality, there have been no instances of projects being rejected for failing to meet minimum standards. As DSIF is a MFA/Danida programme, EKF (which is state owned) will always issue a guarantee. It may, however, put a note on file to say that if a project had been a request from a Danish exporter for an export guarantee the project would have been declined.

At the project level, the ratings table above shows that 11 of the 21 case studies had satisfactory ratings with the other 10 partly satisfactory. A common problem with most projects is that the implementation schedules are too optimistic and that there are delays, primarily due to bureaucratic delays in state agencies/companies and ministries, in some cases of many years. Such delays did not, however, influence the evaluation ratings. One consequence of long delays is that the budgets which

are usually fixed are insufficient for the planned scope of work, due to inflation, as happened for example in the Bangladesh Airport.

In the Vietnam WatSan projects, for example, the partly satisfactory ratings are due to either disputes between project management units (PMUs) who are responsible for implementation and the Danish contractors or a lack of implementation capacity at PMUs. Appraisals of two projects in Ghana (Environment Laboratory and Rural Fibre Optic Cable) failed to anticipate the challenges of a university and the telecoms regulator respectively running projects as businesses, something neither of them had any experience in.

The focus on the completion of individual projects means that insufficient attention is paid to their long-term sustainability as there is no tracking of performance and outcomes post-handover. Moreover, the long-term sustainability of the DSIF programme is not monitored either by DSIF or EKF.

It is important to note that IFU's standard RMS requires staff to monitor a project's performance up until a loan is fully repaid or an equity investment sold. Moreover, overall portfolio risk must be monitored.[56]

JC10.2 Quality of sovereign guarantees and tracking systems

The portfolio of outstanding guarantees, generally issued by finance ministries, is managed by EKF. To date there have been no losses on the portfolio, although this may change as a result of a sovereign debt crisis in Zambia.[57]

EKF monitors risk as it holds the portfolio of outstanding guarantees. It sends four page summary exposure reports every six months that list credit rating of each project which being a sovereign risk is that of the country. In these reports there are charts showing i) geographic spread, ii) spread by credit risk category, iii) guarantee expiry by year. There is a trend towards higher risk countries, particularly in Africa, with export credit ratings there being between 5 and 7 (highest).[58] It is unclear whether these reports are used by EKF to manage the portfolio of

56 IFU is a financial institution with, inter alia, shareholders, an investment and loan portfolio and a balance sheet that have be managed.

57 A sovereign debt crisis in Zambia has resulted in a loan to Nordea Bank becoming overdue. If the arrears are not cleared then Nordea may call on the EKF guarantee.

58 According to the OECD, most DSIF focus countries are rated 6 or 7. Vietnam, however, is currently rated 4, having improved from 6 10 years ago. https://www.oecd.org/trade/topics/export-credits/arrangement-and-sector-understandings/financing-terms-and-conditions/country-risk-classification/.

sovereign guarantees. Moreover, there is no evidence that these reports influence the DSIF strategy as to what projects it targets and supports. In short there is no effective sovereign guarantee tracking system.

As IFU manages a private sector portfolio, there are no sovereign guarantees. It is therefore more cautious than DSIF about lending or investing in high credit risk fragile states and low income countries. Moreover, the move of DSIF to fund large non-commercially viable public sector in high risk low income countries projects reduces the likelihood of identifying projects where it can collaborate with IFU. Moreover, DSIF is no longer undertaking smaller scale private sector projects such as the fish farm in Ghana where there might have been an opportunity for collaboration with IFU.

JC10.3 Quality of environment, social and governance (ESG) risk management

Compliance with environment, social and governance (ESG) risk standards and commitments at project level is reviewed in monitoring and completion reports. JC 10.3 in the ratings table above is a synthesis of the ratings from JCs 6.3 (ESG Risk Management), 7.2 (ESG performance) and 8.3 (Improvements in ESG). In summary, 16 (76%) of the 21 projects reviewed were satisfactory, with the remaining five been partly satisfactory. 17 of the 21 projects were satisfactory for JC 6.3. These high satisfactory ratings show that DSIF is delivering high ESG value added in its projects. The four partly satisfactory JC 6.3 projects had lower ratings either because of a lack of ESG implementation information (Bangladesh Airport and Ba Don in Vietnam), pollution problems (West African Fish in Ghana), or implementation still to be completed (Vi Thanh in Vietnam).

ESG risk management is a strong DSIF competence, particularly in ensuring that projects meet high environmental standards.

EQ 10 Synthesis

Risk management at DSIF is project focused. The objective is to take a project from identification to successful implementation and handover. There is no programme (portfolio) approach to risk management for DSIF. EKF, which issues the guarantees, tracks in a passive way the portfolio but there is no evidence that quarterly reports feedback into the way that DSIF approaches the identification of new projects. Instead, the risk management focus is at the project level on implementation. No consideration is given to the export credit rating of a country. There are no policies or rules setting out portfolio concentration limits by sector, country income country, individual borrower limits or geographically. The approach to portfolio development has been opportunistic, rather

than planned and targeted, although the recent 2021 DSIF strategy signals a transition to a more systematic, planned approach. ESG risk management is a DSIF strength that brings value to projects. The focus on the completion of individual projects leads to insufficient attention being given to their long-term sustainability as there is no tracking of performance and outcomes post-handover. Moreover, the long-term sustainability of the DSIF programme is not monitored. DSIF is willing to do projects in the high-risk Sahel region (Mali electricity project).

The focus on individual projects and not the overall portfolio means that little or no attention is paid to long-term sustainability of the DSIF programme. Having only one financial institution providing loans to DSIF clients leaves the programme vulnerable in the unlikely event that DB decides to stop working with DSIF.

Evaluation question 11: Result Measurement System

What is the assessment of the result measurement system applied by DSIF? Does it meet the needs for providing reliable data on outcomes of project activities during the operation phase and development outcomes in general?

There are several Danida, DSIF and IFU policy documents and guidelines that address the result measurement system (RMS) applicable to DSIF projects. MFA's 2017 Guidelines for Programmes & Projects state that results framework includes indicators, targets, and baseline to allow regular and continuous monitoring of progress and reporting on the gradual achievement of the objectives. The Guidelines for Project Management of Danida Business Finance require the recruitment of a monitoring and verification consultant (MVC – up to completion) and an Outcome Indicator Consultant (OIC) to cover performance for five years after completion. While the M&V consultant is standard practice, OICs are not hired despite project loan agreements requiring clients to report to DSIF for this period. There are also two IFU operating policies that apply to DSIF projects, the first of which is the 2017 IFU Development Impact Model 2017 that should be used for results tracking and measurement, using standard indicators.

In 2018 Nordic Consulting prepared a report on the results framework. It specified, inter alia, general outcome indicators for all projects, sector specific outcome indicators. Moreover, it recommended that 'It is proposed to more clearly define the intervention logic and ToC of each project and explicitly articulate the results chain and flesh out results also after project take-over by the local party, including articulation of the underlying assumptions for how change (impact) will occur.' While formal implementation of the recommendations of this report has yet to occur, it is evident from the case study projects approved since 2018 that the appraisal reports follow the intervention logic proposed by Nordic Consulting, although more could be done to define appropriate development outcome goals and indicators.

The IFU Guiding Principles for DSIF 2020 refer to the results framework and require tracking projects from identification though implementation monitoring to project performance ratings (output/outcome indicators), and ex-post reviews. Most recently the 2020 MFA Adaptive Management guidance note requires the use in project documentation of theories of change and 'Appropriate results frameworks must be identified during preparation. It is part of the preparation of projects that result frameworks and indicators are identified at all levels […]'.

Development outcomes expected from DSIF projects may be direct (as would be mainly the case with WatSan or rural electrification projects) and/or indirect (as would be the case of electrification involving national grids, telecoms, or transport sector projects). Set out below are the evaluation ratings for the 21 projects reviewed.

TABLE 16: OVERALL PROJECT-LEVEL PERFORMANCE – EQ11

Region	Country	EQ11 Results Management System	JC 11.1 Quality	JC 11.2 Reporting	Overall
Asia	Bangladesh	Saidabad II Water Treatment	🟡	🟡	🟡
		Saidabad III Water Treatment	🟡		🟡
		Upgrading Zia International Airport	🔴	🔴	🔴
	Vietnam	Ba Dong Drainage and Sanitation	🟡	🔴	🟡
		Bac Giang Drainage and Sanitation	🟡	🟡	🟡
		Buon Ma Thout Drainage & WWTP	🟡	🟡	🟡
		Ha Giang WWTP	🟡	🔴	🔴
		Lam Son - Sao Vang Water Supply	🟡	🟡	🟡
		Vi Than Drainage and Water TP	🟡		🟡
Africa	Ghana	Environmental Monitoring Laboratory	🟡	🟡	🟡
		Rural Fibre Optic Backbone Link	🟡	🔴	🔴
		Six New Bridges in Northern Ghana	🟡	🟡	🟡
		West African Fish Project	🟡	🟡	🟡
	Mozambique	BTN – Phase I	🟡	🟡	🟡
		BTN – Phase III	🟡	🔴	🟡
		Reinforcement National Power Transmission Grid	🟡	🟡	🟡
		Dredger Beira Port	🟡	🟡	🟡
		Rehabilitation Region Airports	🟡	🟡	🟡
Desk	Ethiopia	Assela Wind Farm	🟡		🟡
	Kenya	Thika Githunguri Water Sanitation	🟡		🟡
	Pakistan	Faislabad WWTP	🟡		🟡

Source: Particip.

JC11.1 Quality and appropriateness of result measurement systems (RMS)

The result measurement system for a project is set out in the appraisal report and includes output and outcome indicators. The emphasis, however, in the 21 projects reviewed has been on output indicators that are easier to define and track than outcome indicators. Moreover, a significant number of outcome indicators were not suitable to capture development outcomes. Baselines and appropriate development outcome targets were generally either not well defined or not appropriate. Development outcomes/impacts were most often only described in generic terms. In water and sanitation projects, it is relatively easy to identify the intended beneficiaries, although the expected health and social benefits arising from access to piped potable water and wastewater systems were not appropriately addressed. In electricity and fibre optic cables, the link with beneficiaries is indirect. In Vietnam there was evidence of the intervention logics being copied and pasted from existing to new projects.

As a result, none of the 21 project appraisal reports had satisfactory RMSs, with 20 being rated as partly satisfactory. About 60% of case study projects have prepared logical frameworks and/or ToCs (13/21 interventions). The quality of this framework varies between projects, but most may be characterised as reasonable in generic terms with insufficient attention having been given to the specific circumstances of a project. In the Ghana bridges project, for example, the development objectives were vague and did not include forecast traffic volumes. The most consistent specification of development objectives occurred in the Vietnam WatSan portfolio, although this was partly due to development logics being copied among the projects. In the case of Buon Ma Thout the appraisal report states that the project will 'improve living conditions of all, particularly the poor with significant economic and environmental health benefits' but without attempting to quantify the benefits. For most projects measurable outcome indicators are missing. In Mozambique, for example, the Reinforcement and Extension of National Power Transmission Grid project report does not include expected development outcomes of the rural electrification component, which should be relatively easy to measure.

A single project, the Dhaka Airport project in Bangladesh, was rated unsatisfactory as the outcome indicators (Capacity utilization of the airport, days for which the airport and the equipment are available) were outputs and there were no genuine outcome indicators or goals.

The RMSs make little or no reference of project contribution to UN Sustainable Development Goals (or Millennium Development Goals

for older projects), even though many projects fit well with them, in particular in water and sanitation.

JC11.2 M&E and reporting frameworks effectively and consistently provide accurate and timely information for management of results of DSIF portfolio

Of the 21 projects construction on five has yet to begin. These are shown as not applicable. Of the 16 where there has been reporting, 11 were rated as partly satisfactory with the other five as unsatisfactory. The lack of post-completion information on projects and the generally insufficient definition of outcomes at appraisal prevented any projects from being rated as satisfactory. As already noted, although clients have a legal obligation to provide DSIF with outcome information for five-year post-completion there is no evidence of this happening in the 16 projects. However, information on outcomes for the projects was principally obtained by the evaluators during the field visits undertaken in Bangladesh, Ghana, Mozambique, and Vietnam.

Five projects were found to be 'Unsatisfactory for the following reasons:

- Bangladesh: Dhaka Airport – no outcome information on file.
- Ghana: Rural Fibre Optic Backbone Link – no appropriate development outcomes targets and indicators were defined.
- Mozambique: BTN Phase III – although outcome indicators specified no data has been collected.
- Vietnam: Ba Don Drainage & Sanitation and Ha Giang – no project specific outcome information on file.

EQ 11 Synthesis

Intervention logics and RMSs in the 21 projects reviewed emphasised and focused on outputs (i.e., up to project completion). Given the DSIF focus on project completion and handover to clients it is unsurprising that output information available was generally good, although with some exceptions.

Much less attention was paid to setting out detailed intervention logics that include appropriate development outcome targets and indicators. In the Ba Don wastewater project, the intervention logic (and other sections) was copied from existing projects to new ones. Moreover, many outcome indicators in appraisal reports relate in fact to outputs. In the older projects the intervention logics are often generic and not

well thought through. Although clients are legally obliged to provide outcome indicator information for five years post-completion this is not happening. Outcome information in the case studies was gathered in the field visits undertaken by Particip in Bangladesh, Ghana, Mozambique, and Vietnam.

There has been an improvement in recent years in the quality of intervention logics in appraisal reports. It appears that while the 2018 Nordic Consult report on RMSs has not been formally adopted, its recommendations are being reflected in projects approved since DSIF was moved to IFU.

Due to a lack of focus on development outcomes and appropriate intervention logics, none of the 21 projects was rated satisfactory, with 18 rated as partly satisfactory. The remaining three were rated as unsatisfactory, an airport project in Bangladesh, a fibre optic cable project in Ghana and a WatSan project in Vietnam.

In summary, the result measurement system applied by DSIF to projects is not of a standard that is sufficient to provide reliable data on outcomes of project activities during the operation phase and development outcomes in general. As the field visits show, DSIF projects mostly generate significant development outcomes that are not being captured and recorded in its RMS. The lack of data on outcomes limits the accountability of DSIF to MFA and its other stakeholders.

Evaluation question 12: Communication

Has the approach to communication applied by DSIF been effective, including to the public and stakeholders in host countries?

JC12.1 Quality and appropriateness of IFU website and information on DSIF made available to potential users

DSIF communication has become more targeted over time, aimed more directly at the stakeholders in both Denmark and partner countries. The core stakeholders have varied over time, but generally have encompassed Danish contractors (now mostly within large scale sustainable infrastructure), consultants and equipment suppliers, whereas the partner country stakeholders are key ministries such as finance, construction, energy, and water. In the 2000s, the DSIF 'mixed-credit committee' (comprising representatives from Danish industry, finance and labour market partners) produced independent, stand-alone annual reports. These annual reports contained information on the main investments done in the preceding year, the total amounts invested and the gearing rate, i.e., the additional amount that is catalysed by the investment.

Between 2001 to 2007 they were the most comprehensive communication efforts and were detailed documents (see e.g. the Annual Report from 2002), supplemented by a dedicated website address.[59] In 2007, the annual report became part of Danida's annual report (and substantially reduced in scope) until it was abolished in 2011. Prior to 2011, the annual reports were used as communication and networking tool with the annual publication being presented at a launch event during which key Danish stakeholders were invited, primarily contractors and relevant consultants. At that point in time DSIF had a thematically broader portfolio as well as more numerous (but smaller) projects, which warranted the holding of such annual event.

In this context it is also important to note that before 2011, DSIF was more autonomous with its own board that had appropriation authority. DSIF could thus also invest more resources in communication activities.

Since then, with the move to a more thematically narrow and fewer (but bigger) projects in the portfolio, DSIF has shifted towards a less active communication strategy more based on demand and if there are major changes that need to be communicated and discussed. This appears to be a relevant move by DSIF as there are now fewer Danish stakeholders that are more thematically focused than previously. The stakeholders,

59 mixed-credits.dk, no longer available online.

not least the contractors, have expressed satisfaction with the DSIF communicative efforts.

The dedicated DSIF website dates to at least 2001 and has been remarkably consistent in content (if not design) during the past two decades with explanations of the guidelines, eligibility criteria, OECD rules, tender announcements, pipeline prospects and highlighted cases. There appear to be adequate information for the intended audience, most notably for potential buyers and contractors, who appreciate this but even more so the close and often informal communication with DSIF.

From an accountability point of view, the communication and disclosure efforts have been appropriate in terms of evidencing the number of pipeline projects, the aggregate number subsidies granted each year. However, compared to the time when the DSIF annual reports were produced, the information level to the broader public has declined and is also less easily available (e.g. OpenAid is not able to extract all DSIF projects) and currently DSIF reporting in the IFU Annual Report amount to only one page. Most importantly, there is virtually no communication about the outcomes and impacts of DSIFs project, with the highlighted case studies focusing on intended results, rather than what has been achieved, with limited reporting on outputs and non on ex-post outcomes and impacts. The reduction of the public-facing documentation (e.g. annual reports) combined with absence of information on outputs, outcomes and impact also reduce the level of accountability of DSIF to the wider group of stakeholders (e.g. CSOs, media and policy makers).

The DSIF pages on the IFU website provide information on the strategic framework of DSIF. The first such was published on the site in 2008, titled Strategic Framework for Danida Mixed Credit, in 2016 revised and renamed to Guiding Principles for Danida Business Finance,[60] with the latest iteration from 2020 named Guiding Principles for DSIF.[61] Despite some text being repeated across the three strategic documents, which reflects a degree of consistency over time, there is also a noticeable change in emphasis in the guiding principles with the first version having more emphasis on both direct and indirect ways DSIF can reduce poverty. In contrast, the 2020 version only argues for indirect poverty reduction. Indeed, whereas the word poverty is mentioned 11 times in the 2008 version it is only mentioned once in 2020, and then only in its indirect version. Thus, there is limited strategic guidance and what is there is irregularly updated.

60 Still can be accessed via: bit.ly/3vcSWTN; last access 31 July 2021.

61 Access via ifu.dk/en/danida-sustainable-infrastructure-finance-en; last access 31 July 2021.

Overall, reporting on DSIF operations and performance through the IFU website and particularly the IFU annual report is limited. Little substantial information is published. Compared with programmes that are organised as legally incorporated funds, DSIF communications and public accountability is poor. Moreover, the trend in communications by DSIF has been to provide less rather than more information.

JC12.2 Benchmark against comparable development programmes/funds

It is challenging to benchmark DSIF against comparable organisations as there are few similar organisations with comparable budgets, set-ups, and mandates. The Dutch Development Related Infrastructure Investment Vehicle (DRIVE) has a similar ambition to develop sustainable infrastructure in developing countries with an overall poverty reduction objective. The Fund is also part of a larger organisation, FMO, that, similarly to IFU, is aimed at investment in businesses by providing capital, knowledge, and networks.[62] The Dutch communication efforts are less elaborate as concerns the website, but that may reflect budgetary and modality differences.[63]

In the future there may be a need for even more targeted approach as the sector concentration and fewer but larger projects is making DSIF relevant for fewer Danish companies (e.g. Siemens-Gamesa and Vestas in the renewable energy sector whereas the water sector is dominated by Suez A/S and Krüger/Veolia).

Furthermore, as the individual project size increases, closer communications with host country institutions (e.g. ministries of finance, energy, and water) may also be required. Already DSIF has well established lines of communication with many of these ministries and related authorities. Embassies have also become more engaged in communication efforts and the drive to make DSIF an integral part of the Danish country strategic framework that guide Danida and wider Danish bilateral cooperation will only accentuate this. However, there is still limited public-facing communication of what DSIF offers on the Danish embassies' websites.[64] Currently DSIF staff generally maintain one-on-one relations with development cooperation officers in Danish embassies and MFA, in part because it draws on close relations some dating back to when DSIF was part of MFA, but there is a risk that as these become weaker,

62 Please see fmo.nl.

63 The Dutch Facility has an annual budget of around EUR 150 million and is not tied to Dutch companies.

64 Based on review of the embassy websites in Kenya, Vietnam, Uganda, Pakistan and Bangladesh. IFU features more prominently.

communication with MFA (and by implication embassies) may suffer. In this context it is important for IFU to make regular engagements with embassies, not least when core staff rotates (e.g. the ambassador). To improve such communication efforts DSIF is considering a more planned approach to portfolio development. Such a portfolio strategy could also be useful in commutations with both existing and potential partners.[65]

Perhaps most surprising in terms of communications, there has been the limited communication between DSIF and the wider IFU. DSIF is still primarily using embassies and the recent trend towards funding primarily public utilises, is likely to increase the demand to engage with these and not the IFU in-country offices (often located outside the embassies). In a sense, DSIF is becoming even more dependent on effective working relations with MFA and its embassies than when it was within the MFA.

EQ12 Synthesis

As the two JCs for this EQ are quite distinct, an overall answer to the EQ would add little to the analyses in these JCs and is therefore not included.

65 Based on communication with DSIF's Vice President.

7. EVALUATION OBJECTIVES

In this chapter the key findings under the 12 EQs are brought together and summarised under the two overarching evaluation objectives set out in the ToR.

Objective 1. Assessment of DSIF's relevance, coherency, effectiveness, efficiency, development impact and sustainability

In the countries where DSIF operates, it has been closely aligned with national development policies (but with variations) and achieves high levels of relevance. With increasing integration into Danida country level strategic frameworks relevance is likely to remain high. Coherence with Danish development policies and programmes was less evident in the first half of the evaluation period as DSIF supported projects in a number of sectors outside of Danish country strategies. Since 2010, however, coherence has improved. DSIF's operations are now more closely aligned with Danish development policies with narrower focus on large public sector infrastructure projects in water and sanitation and renewable energy. Moreover, country strategies should encompass the totality of Denmark's entire range of programmes, including those of IFU and DSIF, that should result in better coherence. Coherence with the programmes of development partners, including co-funding in projects is constrained by the DSIF business model that is incompatible with international competitive bidding that are the norm. The degree to which DSIF has assisted Danish companies to establish permanent business links in the investment destinations is more mixed and difficult to verify.

Geographically, there has been a fair distribution of the 85 DSIF projects in 24 countries, principally in Africa and Asia. The focus has been primarily in LMICs, with limited attention having been given to LICs and fragile states. Operationally, the organisational structure, policies and procedures followed for DSIF operations are in general reasonable but could be improved. Additionality in terms of project realization is pronounced, as most of the projects would not have been realized without DSIF support. Such additionality overwhelmingly takes the form of subsidised long-term finance and grants. DSIF projects have contributed to direct and indirect beneficial development effects but due to a lack of information, these are difficult to quantify. The majority of appraisal reports do not consider the wider development benefits of DSIF projects. Gathering information on outcomes and impacts is further restricted by the lack of ex-post reporting after project completion and handover. Field visits found that projects have

delivered planned outputs and continue to be operational post-handover. Coverage of environmental issues has been to a high standard. Coverage of social and governance issues has been lighter, but no serious detrimental long-term effects have been flagged in case study projects. There is a trend towards DSIF enhancing/maximising development outcomes and strong ESG performance in its projects, at the expense of financial/commercial viability. DSIF does not actually track whether projects achieve sustainability. Field visits for completed DSIF case study projects found that sustainability was satisfactory in only one third of them.

Objective 2. Assessments of (a) DSIF's mandate and the policy directions of the MFA over the evaluation period and (b) DSIF's envisaged future role in Danish development cooperation

DSIF has followed its mandate and the specific policy directions furnished by MFA, although with some lag, as changes to the portfolio obviously take time to implement. In this process DSIF has become more focused and relevant to partner governments who are increasingly viewing DSIF as a partner in financing public infrastructure for green transitioning. However, it is more difficult for DSIF to demonstrate its contribution to the overall legally enshrined objective of Danish development cooperation, which is poverty reduction. While this evaluation does provide some insights into these issues, it has been constrained by a lack of information in DSIF files on the effectiveness of its operations that limits both its accountability and lessons learnt.

DSIF has received only general medium to long-term strategic guidance from MFA on what sectors and geographical areas it should focus on, apart from a continued concentration on public infrastructure in renewable energy, water, and sanitation, primarily in Africa. With respect to its position in the spectrum of Danish development cooperation, DSIF itself has started to consider projects outside its tied-aid model where other forms of Danish technical expertise and support may be more appropriate. As a unit within IFU, DSIF in 2021 prepared an internal strategy that, inter alia, sets out a greater focus on sub-Saharan Africa, more financial and institutional innovation (including a broader perspective on the promotion of Danish interest) and finally also increased focus on technology transfers. The evidence in this evaluation support such a change, but arguably there may be a case to go even further to make sure that DSIF is fit for the future. In particular the rather rigid tying to Danish suppliers is increasingly restricting DSIF in its ability to engage with agility and flexibility, not least because the concept of 'Danish' content is becoming more intangible and often intertwined with content from other countries, mainly because Danish companies have pursued globalisation and outsourcing intensively. This calls for a rethink of the current restrictions imposed on DSIF, that will allow for better delivery on its development mandate. The recommendations contain pointers to what such a rethink should focus on.

8. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

At Programme Level

As a tied-aid facility, DSIF has been fit for purpose in terms of delivering on agreed outputs during the evaluation period. It has been less good, however, in tracking the development effectiveness of projects, with insufficient information on development outcomes. DSIF has adjusted to and followed changing MFA and Danida policies and mandates. It has identified areas of core Danish competencies and focused on fewer and potentially higher impact projects within the public sector. Moreover, it has worked well with Danish companies offering cutting edge technologies required for green transitioning, which are increasingly in demand in partner countries. tied aid. For the most part, DSIF has fulfilled its **mandate** and complied with Danida policies. It adapted to shifting Danida sectoral priorities by, inter alia, ending private sector projects (in agribusinesses and industry). It moved decisively towards green infrastructure, most notably within renewable energy, water, and sanitation. Moreover, it now concentrates on larger investments. A downside of this shift is that DSIF currently only approves around one project per year and has a thin pipeline in a small number of countries reducing its geographic reach.

The anticipated benefits of the **relocation of DSIF to IFU** have only been partially realised. The envisaged synergies have, with a few exceptions, not materialised. This is not due to a lack of commitment on the part of DSIF or IFU. This is in large part due to an incompatibility between DSIF's tied aid public sector operations and IFU's private sector mandate that makes project-level collaboration difficult. Indeed, the recent move to bigger projects for public infrastructure has made such synergies even harder to achieve, although there are clearly opportunities for complementary IFU classic investments, which have occasionally also been seized. The objective of leveraging commercial capital has also remained an unrealised ambition as the business model is not particularly attractive to Danish commercial investors.

On the positive side, the **relocation of DSIF to IFU** has formalised and made explicit the goals and strategic objectives that MFA has set for DSIF and how they are monitored, including the formal dialogue and accountability through semi-annual steering committee meetings. DSIF, for its part, benefits from being at arm's length both physically and managerially from MFA. It is able to focus more on strategic issues and

has more operational freedom (e.g. in recruiting more specialised staff) to pursue its objectives. Furthermore, DSIF now being one of the 10 investment units within IFU where it is in a private sector development banking environment should allow it to look at the overall development benefits of projects in a broader way and potentially introduce new ways of structuring them.

On the crucial mandate objective of delivering on the **poverty reduction**, that is enshrined in law, DSIF has made inadequate efforts to define and quantify development outcome objectives and, more importantly, track their achievements (see, for example, Evaluation question 6: Impact). DSIF's focus is principally on outputs and its engagement with clients ends with completion and handover of projects.

At the strategic level, **coherence with MFA's global policies,** which DSIF consistently followed, has been robust. However, at country level there have been more challenges, especially when the portfolio included a higher number of smaller, highly diverse projects that often did not fit well with Danida's overall country engagement strategy. Coherence was, therefore, more mixed in the 2001-2009 period. The transition to larger public sector infrastructure projects in recent years and closer collaboration with embassies has, however, improved project and country-level coherence.

The focus on individual projects and not the overall programme has meant that little or no attention is paid to the **long-term sustainability of DSIF**. Moreover, having just one Danish bank (Danske Bank) making loans to DSIF clients, has left the programme vulnerable in the unlikely event that the bank decides to stop working with DSIF. It also restricts DSIF's ability to provide untied loans.

DSIF's **tied aid operational model** is based on the assumption that while Danish equipment and Danish contractors are generally (but not always) more expensive than internationally procured equipment or local/regional contractors, this cost disadvantage is expected to be (at least substantially) offset by the assumed lower life cycle cost of Danish equipment and higher quality construction work done by contractors, i.e. higher up-front costs but equipment and services that are of higher quality and last longer. In addition, the higher investment costs involved in the tied aid model are partially offset by the soft DSIF supported loans and other grants, as provided for in the OECD tied aid rules. Although these assumptions may be valid, there has been no work undertaken to assess whether the DSIF tied aid model works as assumed and, whether the benefits accrued by public utilities, from working with DSIF, provide the best value-for-money, developmentally and financially.

Moreover, the tied aid model limits development effectiveness and flexibility. Specifically, the operating model restricts DSIF's ability to

support and complement other Danish in-country engagements in focus countries, potentially reducing the overall effectiveness of Danish aid.

Looking forward, DSIF faces at least two **medium- to long-term trends** in its focus countries, to which it will have to adapt to remain relevant. Firstly, the demand to finance the green transition is likely to increase to a level at which DSIF resources will be insufficient. It will, therefore, need to work alongside development partners, something that DSIF did in only one of the 21 case study projects. Secondly, some sectors that DSIF has supported in the past may become commercially viable and bankable – land-based wind farms, for example. Consequently, today's focus areas may not be appropriate for DSIF support in the medium to long term.

At Project Level

The conclusions below focus on the operating level, following the structure of the evaluation matrix. Before setting out these conclusions, it is useful to provide some context by summarising the key portfolio trends and features. Overall, **DSIF's geographical reach** has been limited. In Africa it has undertaken projects in nine countries, with a particular focus on three: Mozambique (6 projects), Ghana (5) and Egypt (4). In Asia it has undertaken projects in 10 countries, with China accounting for more than one third and Vietnam almost a quarter. There was an initial focus on China and Vietnam during the first half of the evaluation period until 2010, when the portfolio started to become geographically more diversified. In Latin America, there does not seem to have been a particular focus. In Europe there was one project in Armenia.[66]

Both in terms of **number of projects** and total **value of projects**, there has been a preference for lower-middle-income countries (LMIC). Over the 19-year period, 67% by number and 60% by value of projects have been in LMICs compared with 31% and 38% respectively in low-income countries (LICs). This trend continued in the 2010-2019 period, when there was a slightly lower proportion of LIC projects.

The draft **2021 DSIF Strategy presentation**, if implemented, would result in a more systematic and strategic way of developing the portfolio in which, inter alia, development effectiveness factors would be given more weight. Moreover, with bigger projects within public infrastructure, DSIF will need to increase synergies with national policy and strategic frameworks to ensure that it aligns with the national and local efforts in the relevant sectors. This will also allow for better sustainability and impact in terms of poverty alleviation. Indeed, while DSIF should seek synergies with other Danida programmes (and IFU's) where they logically emerge, care should be taken not to attempt to create purely Danish synergies, that could compromise overall development effectiveness

66 Although the pipeline includes projects in Ukraine.

from a partner country perspective. In this context, DSIF will need to deepen the cooperation with embassies and other development partners (e.g. development financial institutions) to benefit from their country knowledge if it is to stay fit for purpose and maximise development effectiveness.

Relevance and coherence
By concentrating on sectors and areas where Danish companies, contractors and consultants are internationally competitive and can add value, DSIF has remained relevant to project buyers and government partners. The phasing out of support to smaller private sector projects and a concentration in recent years on large public sector infrastructure (predominantly water, sanitation, and renewable energy) has led to a **sharper project focus**. At the client level, DSIF has supported projects in sectors prioritised in Danish country development plans and strategies, especially in recent years. To be relevant developmentally, the move to only supporting large projects makes it even more important that DSIF projects be in sectors of the highest national importance.

There were no examples amongst the case studies of DSIF co-financing projects with partners such as multilateral or bilateral development institutions.[67] DSIF has therefore not been able to leverage its investment and expertise by working alongside development partners, limiting its relevance.[68]

Complementarity with Danish development policies and strategies
In most projects reviewed there were **strong complementarities** between DSIF and other Danida engagements although even more could be done. Cooperation on country interventions between DSIF, embassies and Danida HQ in strategic sectors (water, sanitation, and renewable energy) could have been better. One area of complementarity where further opportunities could arise is between Danida grants that can be used to subsidise utility tariffs so that they are affordable in DSIF supported projects, thereby enhancing development outcomes and impact.

Result Measurement System and Development Effectiveness
Logical and results frameworks in the 21 projects reviewed emphasised and focused on outputs (i.e., up to project completion and handover). Insufficient attention was given to outcomes (baselines, targets, and indicators to measure outcome achievement). Given the DSIF focus on project completion and handover to clients it is unsurprising that the

67 In the Bangladesh Saidabad III project, however, development partners are financing different parts of the project, i.e. they are working in parallel.

68 In Ukraine there are attempts made using grants only, which limits the scope for upscaling.

output information available, with some exceptions, was generally good. Moreover, many outcome indicators in appraisal reports relate in fact to outputs. In older projects, logical- and monitoring- frameworks are often generic and not well developed or tailored to project characteristics. In recent years there has been an improvement in these frameworks, although they still include generic indicators and do not attempt to identify improvements in the lives of the ultimate beneficiaries, such as better health due to clean water and sanitation.

Tracking outcomes over the medium term is not possible as project monitoring terminates at the end of the one-year period following completion and handover (with the verification of no defects). In fact, DSIF project management guidelines require that "[…] the Project Implementing Partner will report the outcome indicators for a period of five years," but this has not occurred. Outcome information for the case studies was principally gathered during the field visits undertaken by the evaluation team in Bangladesh, Ghana, Mozambique, and Vietnam.

In 2018 Nordic Consulting Group issued a report to DSIF on how to improve its results measurement system.[69] This report's recommendations have not been incorporated into DSIF's operating policies and procedures, although some of its recommendations are being reflected in projects approved since DSIF's move to IFU.

Given these weaknesses in the RMS it is unsurprising that none of the 21 projects were rated satisfactory on this measure, with 18 rated as partly satisfactory and the remaining three being rated as unsatisfactory. In short, the result measurement system as applied to projects by DSIF is a significant weakness and far below the standard required to deliver appropriate, reliable data on outcomes of project activities during the operation phase and development outcomes in general.

The evaluation field visits provided most of the data on outcomes, most of which is qualitative, as well as often anecdotal in character. DSIF **projects mostly generate significant development outcomes that are not being captured and recorded in its monitoring frameworks.** Water and sanitation projects (if properly implemented) should deliver significant direct outcomes in beneficiary communities that can be measured and quantified. Outcomes have been enhanced by compliance with the higher environmental standards that DSIF has insisted upon as a condition for its support. The lack of data on outcomes limits the accountability of **DSIF to MFA** and its other stakeholders.

69 Nordic Consulting Group (2018): Results Framework for Danida Business Finance.

Over the evaluation period there has been an **increasing focus on development outcomes** at the expense of commercial viability. DSIF is increasingly willing to support projects that are likely to remain financially fragile and dependent on government subsidies. This is appropriate provided that the infrastructure projects themselves can cover operating and maintenance costs which may involve government subsidies and other support. This, however, is often not well discussed in appraisal reports. This tilt in the balance towards a stronger development focus is partially obscured by several project documents making overly optimistic assumptions that utility tariffs will be raised, which is unlikely given that low prices are deemed necessary by governments to enable low-income groups to pay for services and thus retain political support. In the water, sanitation, and renewable energy sectors, for example, the expected development benefits of increasing access of the poor to these services appear to be high enough for DSIF to accept the risks associated with weak financial performance.

A lack of reporting post-completion on how projects are performing means that DSIF has **limited information on project sustainability.** Furthermore, there is no system in which lessons learnt from projects already undertaken, i.e., what works, what does not and why, are recorded for use in the design and structuring of new projects. The evaluation field visits and interviews with stakeholders therefore provide insights into project sustainability; or likely sustainability for projects only recently completed. In half of the completed projects there were good indications that they will continue to deliver developmental benefits over the medium to long term. In another third of projects there was some but not conclusive evidence of developmental sustainability. Coverage of environmental issues and delivery of direct environmental benefits and potential sustainability is strong. Social and governance benefits are also being delivered although consideration of these issues has been less of a priority. Financial sustainability was much weaker with only two projects having satisfactory ratings for this kind of sustainability. Project documents tended to be too optimistic on economic viability with constraints and risks underestimated, as was evident, for example, in the Ghana fibre optical cable project that failed to consider the regulatory issue that prohibits one government agency from buying commercial services from another agency.

Additionality

DSIF's additionality was evident in 90% of the case study projects reviewed. Additionality primarily took the form of subsidised finance and grant packages that were required for projects that were not financially viable (financial additionality). In most projects in the water, sanitation and renewable energy sectors, low tariffs that make their services affordable to low-income groups meant that utilities were dependent to varying degrees on subsidies to help cover operating and maintenance costs. As a result, such projects were not 'bankable' and could not raise

finance on commercial terms. In none of the case study projects was additional commercial/DFI funding mobilised. It should be noted that DSIF's tied aid model, with equipment supply and contracting restricted to Danish companies, may not be acceptable to development partners who generally require international competitive bidding.

Non-financial additionality was found in only half of the case studies and took the form of support for feasibility studies, ESG studies and other DSIF support in launching projects.

Operating Policies

With the exception of projects having to be approved by both IFU and MFA, the policies and **procedures for the identification and appraisal** of projects are appropriate and similar to those used in other development institutions. There is some overlap and duplication between DSIF and MFA during the project cycle, resulting in additional workload for DSIF staff and thus longer processing times. MFA's sees its role during appraisal as ensuring that DSIF projects are in accord with its policies and strategies. Although there has been an improvement in recent years, DSIF project documents do not include sufficiently detailed theories of change that set out development baselines, goals, and appropriate indicators with which to measure development effectiveness. This is not because the policies as such are weak, rather that implementation has not been adequate.

The draft **2021 DSIF Strategy** (an internal IFU document), sets a more targeted and systematic approach to identifying projects in water, sanitation, and renewable energy sectors in those countries where the development effectiveness of DSIF will be highest. The Project Development Facility plays an important role in bringing project ideas to a stage where DSIF can support them. As mentioned above, DSIF is dependent on a single Danish bank, Danske Bank, to fund all its projects, which is perceived as a source of vulnerability and is also restricting DSIF in providing un-tied loan finance.

Compared with broadly similar programmes, IFU management costs are modest for the services provided, although this may in part be due to limited monitoring of development outcomes.

Risk management

Risk management at DSIF is project focused. There is no programme (portfolio) approach to risk management for DSIF. EKF, which issues the guarantees, tracks in a passive way the portfolio but there is no evidence that quarterly reports feed back into the way that DSIF approaches the identification of new projects. Instead, the risk management focus is at the project level of implementation. No consideration is given to the

export credit rating of a country and DSIF is willing, for example, to do projects in the high-risk Sahel region[70] (e.g. Mali electricity project).

There are no policies or rules setting out **portfolio concentration** limits by sector, country income category, individual borrower limits or geographic location. The approach to portfolio development has been opportunistic and without regard to the existing portfolio. The recent, but still an internal draft, 2021 DSIF strategy, however, signals a more systematic, planned approach. The focus on the completion of individual projects means that insufficient attention is paid to their long-term sustainability as there is no tracking of performance and outcomes post-handover. Of note is the approach to ESG risk management where the insistence on high standards in projects is a particular DSIF strength that brings value to projects.

At the operating level, the DSIF strategy of fewer but much larger projects presents a risk to the continuity of operations as preparation delays are likely to interrupt the already long project pipeline period, which is thus likely to be 'lumpier'.

Communications

The communication approach is effective in terms of reaching the narrow set of core stakeholders in Denmark (e.g. contractors and consultants) and in partner countries (e.g. ministries, authorities, utilities, and embassies) by using direct engagements and establishing relations, often on a personal basis. However, there is potential for systemising the approach somewhat in e.g. developing material that could promote DSIF offerings and inform potential partners better, including Danish Industry.

DSIF **communication to the wider public** has become somewhat less effective over time with the publication of an annual report being replaced by the OpenAid website that provides less information and is harder to extract in an easily readable form. The absence of an annual report combined with limited overall strategic guidance and results frameworks has allowed for a more ad hoc and transactional approach to pipeline development and engagement choice. It has also reduced the accountability of DSIF to the public as there is no overview of the portfolio and only limited information on the outputs produced. Moreover, there is no reporting on outcomes and impacts against the key objectives, including the core one of poverty reduction. The Austrian tied-aid facility, OeKB, by contrast, issues annual reports that contain useful information on its operations.

70 The Sahel is a region that Danida is emphasizing, inter alia, for immigration reasons.

Involvement of Danish Exporters, Contractors and Consultants
A relatively **small number of Danish exporters, contractors, and consultants** were directly involved in the 21 case study projects. There is no policy or formal definition of what type of exporter, contractor or consultant is eligible to participate in a DSIF project. The de facto, informal eligibility criterion is that a proposed Danish partner has significant operations in Denmark: for example, a factory producing wind turbines or a significant number of people working in an office or facility. The lack of a clear definition may allow a non-Danish company to set up a small office and subsidiary in Denmark to become an eligible contractor, as appears to have happened in some of the Vietnamese water and sanitation projects.

Recommendations

Key Recommendations

Upgrade the Results Measurement System. As described in detail in Annex H: Detailed suggestions for an improved Results Measurement System, DSIF should put development effectiveness at the centre of its projects, starting with the theory of change in project reports and tracking outcomes for five years post-completion. This should lead to a much stronger commitment to delivering the forecast economic rates of return/development outcomes and ensuring the long-term sustainability of projects. Please see Annex H for detailed suggestions for a future RMS for DSIF.

Until wider finance, governance and accountability reforms are undertaken (see next para.), **MFA should increase its assistance to DSIF in the preparation phase,** including ensuring that appraisal reports are fully compliant with Danida policies and strategies. Currently, project processing involves both IFU and the MFA, resulting in delays and additional workload for DSIF staff. While MFA's participation in appraisals has been uneven in terms of frequency and quality, most recent examples from Uganda and Kenya do point to substantial added value of such participation if the right competencies are engaged. Additionally MFA could assist DSIF in formatting required documentation for presentation of projects to the Danida Programme Committee and the Development Policy Council. These two bodies provide valuable oversight and useful comments and suggestions (e.g. in the Mali transmission line project as well as for the wind farm in Ethiopia). The current portfolio and limited number of projects being processed annually (around one) does not justify the establishment of a new DSIF governance set-up, as the current transaction costs imposed on DSIF are manageable, if still an additional administrative burden. Stronger MFA (including embassies) assistance in the preparation phase could further reduce this burden

and complement DSIF competencies within political economy analysis and local contextualisation.

However, if DSIF is to provide more untied financing and possibly also undertake insourcing of the funding of the loans (as this evaluation recommends should be studied), the loan volumes and number of projects could increase even without increases in the Danida grant aid, as more finance can be leveraged per grant aid Krone. In this 'big bang' reform scenario, where DSIF would become akin to a public sector infrastructure financing arm of the IFU, governance and accountability reforms may be appropriate. In this scenario, it is recommended that DSIF assumes full responsibility for the preparation process, and that a DSIF board be established to replace the role of the programme committee and the UPR, with representation from the IFU, the MFA, civil society, industry, and labour. There should thus still be a two-stage approval process but following DSIF's own timelines and formats. This will necessitate the updating of the administrative agreement between the MFA and the IFU as well as the legal document from 2017.

Consider undertaking untied aid projects This would make it easier for DSIF to work with DFIs and increase the reach of the Danish aid Krone, as the subsidy level would be lower. Potentially, the volume of DSIF projects could increase. Such a radical change in the business model would have to be based on an in-depth review to determine: i) whether there is an opportunity in public sector development finance that DSIF could play a role in, and ii) how DSIF would have to change operationally to be able to take advantage of the opportunity, in particular how it could acquire the necessary project finance skills. A possible starting point in the formulation of collaboration models with other DFIs may be the Kremenchuk district heating project in Ukraine, in which the financial plan included a DSIF grant and a Nefco loan.[71] Sectorally, it is likely that DSIF would continue to focus on renewable energy, water, sanitation, and waste management/recycling sectors where Danish companies and contractors are internationally competitive.

Specific Recommendations

Relevance and Complementarity with Danida Strategies
DSIF's sector focus should be reviewed and refined on a regular basis to ensure that it remains relevant to clients in target countries and to the mandated objective of poverty reduction. While energy and especially water are likely to remain key sectors, there may be others where Danish expertise brings added value to infrastructure projects. There could,

71 Only limited information was available on this project as it was not a case study. The approach being considered merits further analysis.

for example, be an increased focus on green technology that would be a logical extension to its existing focus sectors. Such technology could include waste management, recycling, upcycling and 'cradle to cradle' technologies for example, sectors where Danish expertise could be introduced to developing countries. Other areas that DSIF might move into include climate resilient and mitigation infrastructure, such as, for example, the repurposing of old coal plants to provider cleaner energy, something that the World Bank has identified.[72] To be eligible for support, projects in such sectors should have clear poverty alleviation objectives.

Closer collaboration with Danish industry through the Confederation of Danish Industry should help identify new sectoral opportunities for DSIF. Within energy, non-commercial, land-based wind turbine projects may be restricted to low-income countries. Instead, commercially competitive operations, not requiring DSIF support, will probably emerge but there could still be a role for distribution and transmission, also to optimise development effectiveness (e.g. reach poorer and more remote beneficiaries through e.g. rural electrification and access of the urban poor to potable water and sanitation). DSIF should intensify its engagement in the water sector, possibly creating more longer-term and strategic partnerships with Danish resource institutions and companies, many of which are located in the 'water valley' of western Denmark. DSIF strategic documents should include sections discussing its continuing sectoral relevance and proposed refinements or changes.

DSIF should make even **greater use of embassies** to help identify projects and ensure a good alignment with the Danida country strategic frameworks. Such frameworks offer a good entry point for DSIF to identify new project opportunities, working closely with embassies. While solid progress has been made there are opportunities for even better in-country coherence where, for example, Danida grant financing can ensure higher inclusiveness and better development outcomes of DSIF investments if properly planned and executed. Similarly, the strategic sector cooperation programmes could be leveraged even more to ensure that Danish public sector competencies are utilised where relevant. Also, during implementation, DSIF staff and monitoring consultants visiting projects should always meet with embassies so that they are fully aware of any wider economic, environmental, and political issues that may affect outputs and outcomes of such projects.

Systematic integration into ongoing and future country strategic frameworks will aid this process and allow for better alignment, potentially ensuring that Danish industry interests are also leveraged

72 See, e.g., World Bank: Coal Plan Repurposing for Ageing Coal Fleets in Developing Countries, 2021.

whenever relevant and feasible. Cooperation with the Danish Trade Council may assist in some cases. DSIF projects will clearly form part of this process as the strategic frameworks are encompassing Denmark's entire engagement and strategic direction in a country. However, there will also be instances where there are no clear synergies between the bilateral grant-based development programme and DSIF in which case one should be careful not to attempt to create synergies that are not obvious.

Experiment more with IFU and DFI co-financing in projects, even if it may require undertaking projects where tied aid cannot be used. DSIF's special business model may result in missed development opportunities. To be able to seize these and increase relevance among its peers, it should engage more systematically in such co-financing and parallel/complementary financing efforts. This has the potential to promote the division of labour between concessional, blended, and private funding at the project level. Examples from Ukraine projects offer some pointers to how such engagements might be structured and provide key lessons, that may be applicable elsewhere.

DSIF should intensify efforts to **strengthen business links in partner countries** to maximise the opportunities for Danish exports of equipment and services, including know-how and technical expertise. If DSIF aid is tied, more efforts should be devoted to ensuring that Danish companies benefit above and beyond the specific DSIF investment, e.g. from sustained exports. Danish companies and partner countries could also benefit from offering and implementing non-financial aid, i.e., technical assistance focused on capacity building in the public and private sector, which could involve support in developing business models for monetarizing the provided infrastructure. Close engagement with Danish industry would aid this process in some instances.

DSIF Mandate

Consider **widening the mandate** governing portfolio choice to include a broader list of activities and partners, while simultaneously sharpening operational focus on development outcomes. While DSIF has to date been able to find a balance between a policy-driven and demand-driven portfolio, this may become more difficult to achieve. A combination, inter alia, of factors, including debt crises in many partner countries and increasingly narrower range of competitive and interested Danish contractors, may necessitate changes in the portfolio's guiding principles. Specifically, a broader set of sustainable infrastructure categories and possibly also increased use of untied credits could facilitate collaboration and joint investments with other DFIs.

In this context, there is a need to put less emphasis on leveraging (Danish) commercial capital, which has proven challenging, and instead **seek to work alongside DFIs** to undertake larger infrastructure investments, that would **complement DSIF's tied credit**s and thus provide more flexibility in times of limited opportunities for Danish contractors. This could also assist in having a sharper developmental focus in the projects, as untied DFIs tend to have.

Given that there are generally limited direct synergies with IFU's core business, DSIF should seek to **leverage complementarities** only where they appear feasible. The DSIF portfolio has, by policy choice, evolved further away from IFU classic and it can be counterproductive to try and force synergies where the scope is limited. Instead, it is suggested to specifically focus on potential synergies with IFU by improving the complementarity of DSIF investment and IFU strengths. IFU could, for example, assist in realising innovative project structures by supporting business development in areas where DSIF finances a new energy generation, thus ensuring better leverage of the investment and possibly also a more inclusive focus (e.g. supporting MSME development in particular). One possible pathway to achieve this could be DSIF support to energy transmission infrastructure as suggested above.

Additionality

When undertaking appraisals, DSIF should seek to **maximise its overall additionality** by discussing with project buyers where non-financial forms of support from DSIF may be appropriate and can be incorporated. Technical assistance for operations and maintenance post-completion, which is being used in some projects, should be provided more widely. Appraisal reports should explain how DSIF has sought to maximise its contribution both financially and non-financially.

Risk management

Better risk management will enhance the sustainability of projects.

Introduce portfolio concentration limits by sector, country income, individual borrower limits and geographic location. This would make explicit, for example, how many new projects would be done in the focus sectors over a specified time period, as well as how much could be committed to each sector. There should also be country and regional

limits, as well as by country income category, that should make the portfolio more diversified geographically.[73]

EKF portfolio reports should analyse trends in the portfolio and be linked to implementation of the overall DSIF strategy. New projects would then only be considered if they fall within the scope of the strategy and do not lead to concentration limits (geographical, country income and sectoral) being exceeded.

At the project level, greater attention in appraisal reports should be given to **assessing the reasonableness of implementation** schedules and the capability of sponsors to operate and maintain projects post-completion. Linked to this is ensuring that utilities and projects have sufficient financial resources to cover their operating and maintenance expenses.

Communications

DSIF, which has recently become a dedicated investment unit within IFU, **should communicate more effectively and comprehensively about its ongoing portfolio**, the results it is achieving (many of which are impressive and could form part of a wider learning platform) and the impacts. This also clearly relates to the wider issue of not only communicating but also evidencing the results of DSIF, which has been sorely lacking (see under RMS). Such communication efforts would also improve accountability. The Austrian OeKB tied-aid programme that publishes annual reports is a useful model.

DSIF should make public on its website its **portfolio approach and strategy.** This could be a useful component in attempts to raise awareness of what DSIF does and inform a wider set of stakeholders about the key priorities and plans that govern it.

To increase awareness of what it does, DSIF should work more closely with **Danish industry groups** (industry associations etc.). This should benefit DSIF in terms of keeping up to date on Danish expertise and technology in focus sectors. It may also generate possible project opportunities for DSIF from Danish companies who are considering projects in focus countries but are concerned about the risks and how to find project buyers.

73 It should be noted that the concentration in part is driven by a deliberate strategic choice. However more should be done to be explicit about the current and future risk inherent in investing in infrastructure in low-income and low-middle-income countries.

Matters for Further Review and Analysis

Danish Company, Contractor and Consultant Eligibility
To further increase legitimacy of DSIF it is important to demonstrate the **unique Danish added value** both in terms of investments and in generating business links that last longer than the DSIF project itself. This will require that companies are bona fide Danish companies that deliver more than contract management and quality assurance, in terms of high-quality equipment, know-how, technology, capacities and project management. A review should be undertaken to **define clear eligibility criteria**, which should be posted on the DSIF website.

Review of DSIF Business Model
DSIF should examine the potential of **alternative business models** that are more open to cooperation with other financial institutions. The current way in which DSIF structures projects, through loans to governments that are disbursed to the target projects, limits its additionality, and makes it difficult to co-finance with development and commercial banks. Consideration should be given to structures, such as dedicated legal entities (project companies), into which DSIF supported funding can be disbursed and a project finance approach adopted to mobilise commercial or development bank loans, following a blended finance financial plan.

Value Added of Tied Aid
As tied aid can impose a deadweight cost, it is important to continually ensure that DSIF and its Danish partners deliver competitive products and services that are meeting the demands of partner countries, ideally even without the subsidy. Consideration should be given to a **review to assess the actual value (and, by implication, cost) of tied aid** and the potential of other modalities for DSIF.

Initiate a study of the feasibility of in-sourcing the financing of DSIF projects. Contrary to expectations, there has not been real competition for the provision of financing to DSIF and the current situation leaves DSIF vulnerable and potentially in a position where its commercial offering is not market tested. Moreover, the bank currently used is not interested in providing untied loans, further restricting DSIF. However, any such in-sourcing will require time and thorough preparations as the IFU is not currently geared towards this kind of finance. IFU would have to establish proper treasury functions, oversight, regulation, and a credit committee.

MINISTRY OF FOREIGN AFFAIRS
OF DENMARK

2 Asiatisk Plads
DK-1448 Copenhagen K
Denmark

Tel +45 33 92 00 00
Fax +45 32 54 05 33
um@um.dk
www.um.dk

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